

Chapter 4

Nick Lauerman

Started 15 May 2020

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1 Data Setup

From Adendex C

```
text.v <- scan(file = "./SupportingMaterials/data/plainText/melville.txt",
               what = "character",
               sep = "\n")
start.v <- which(text.v == "CHAPTER 1. Loomings.")
end.v <- which(text.v == "orphan.")
novel.lines.v <- text.v[start.v:end.v]
novel.v <- paste(novel.lines.v,
                collapse = " ")
novel.lower.v <- tolower(novel.v)
moby.words.l <- strsplit(novel.lower.v,
                        "\\W")
moby.word.v <- unlist(moby.words.l)
not.blanks.v <- which(moby.word.v != "")
moby.word.v <- moby.word.v[not.blanks.v]
```

2 Dispersion Plot

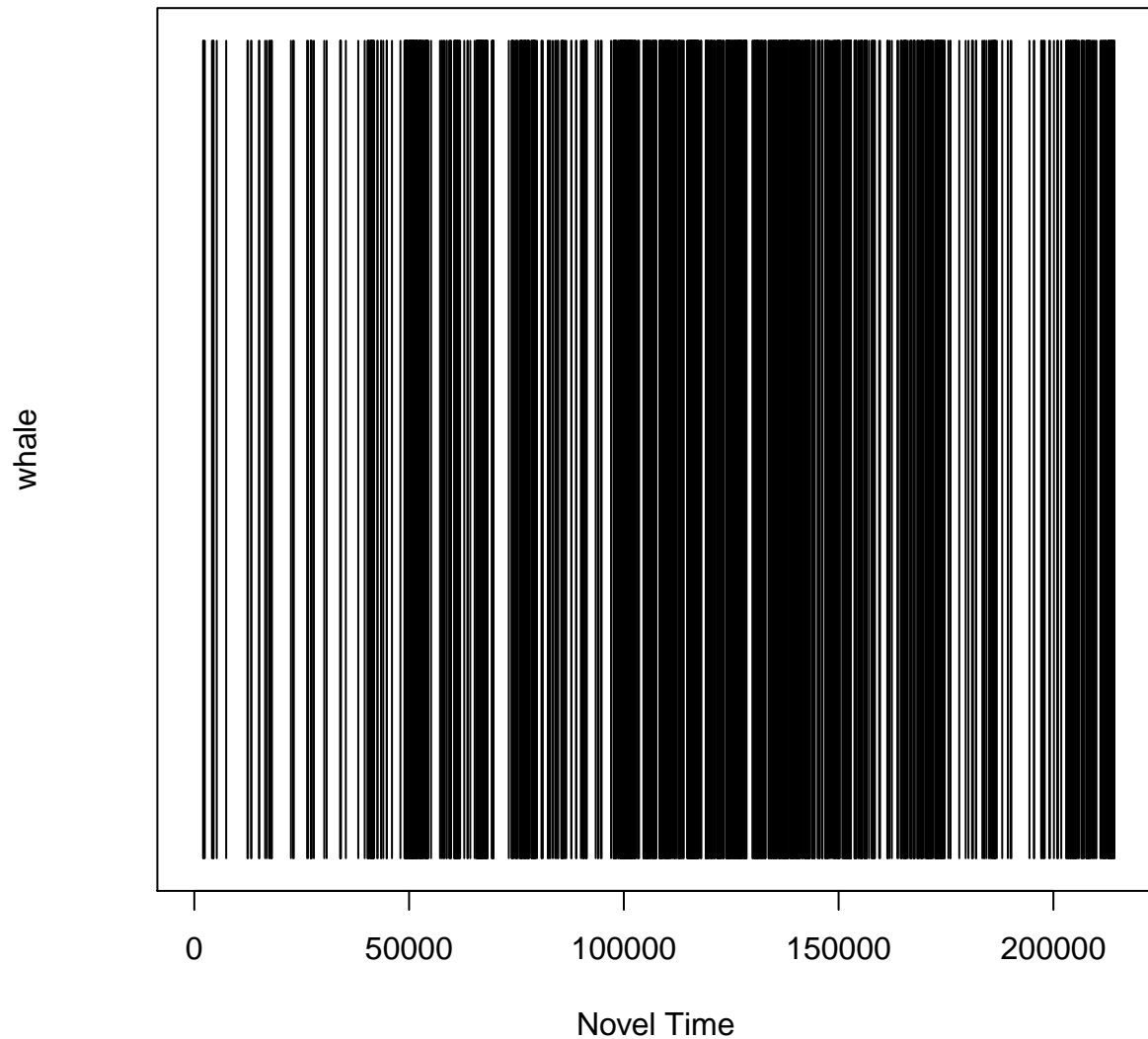
```
n.time.v <- seq(1:length(moby.word.v))
whales.v <- which(moby.word.v == "whale")
w.count.v <- rep(NA, length(n.time.v))
w.count.v[whales.v] <- 1
plot(w.count.v,
     main = "Dispersion Plot of 'Whale' in Mobey Dick",
     xlab = "Novel Time",
     ylab = "whale",
```

```

type = "h",
ylim = c(0,1),
yaxt = 'n')

```

Dispersion Plot of 'Whale' in Mobey Dick

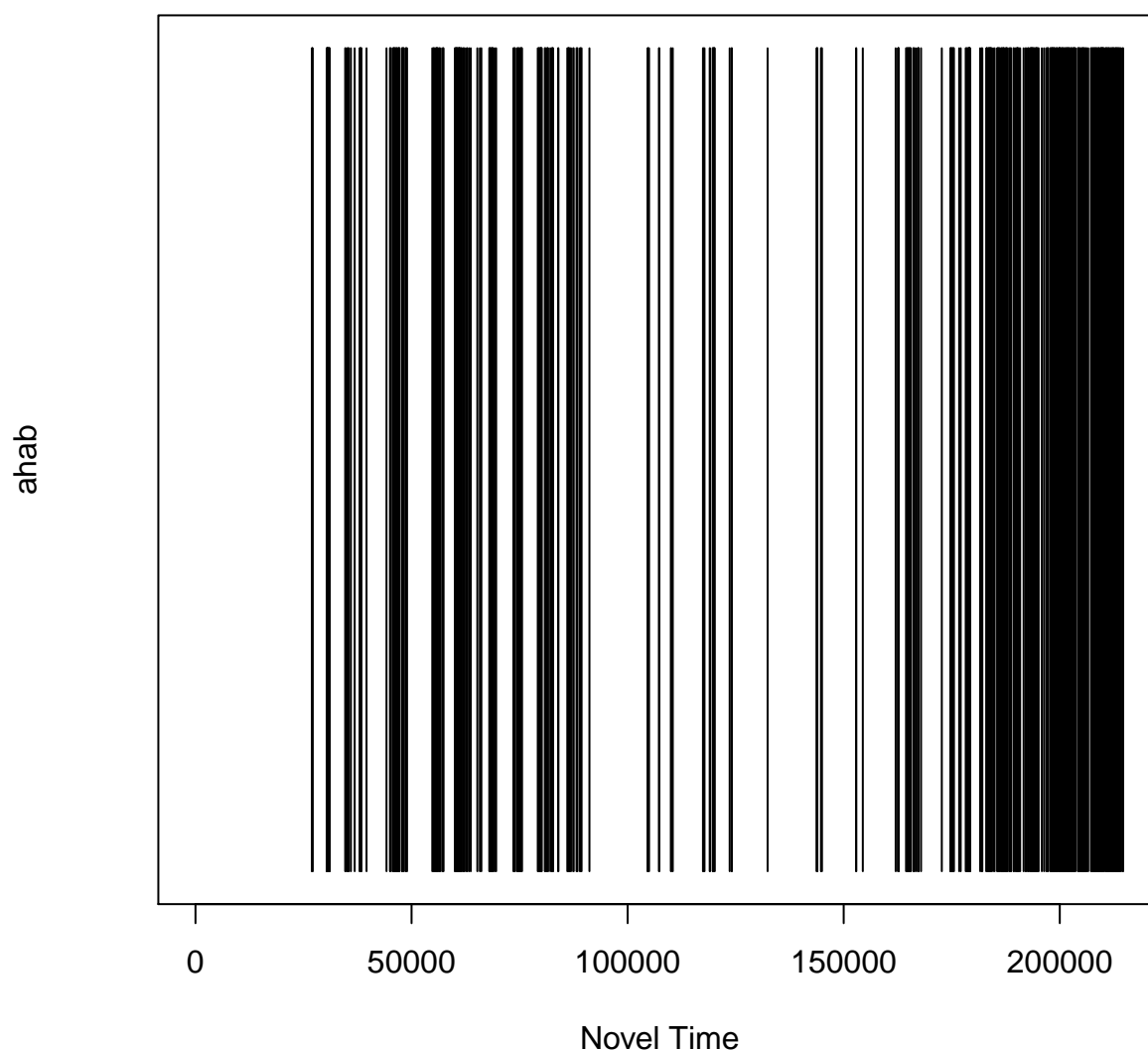


```

ahabs.v <- which(moby.word.v == "ahab")
a.count.v <- rep(NA, length(n.time.v))
a.count.v[ahabs.v] <- 1
plot(a.count.v,
     main = "Dispersion Plot of 'ahab' in Mobey Dick",
     xlab = "Novel Time",
     ylab = "ahab",
     type = "h",
     ylim = c(0,1),
     yaxt = 'n')

```

Dispersion Plot of 'ahab' in Mobey Dick



3 Searching with *grep*

3.1 Clearing the workspace

```
rm(list = ls())
ls()

## character(0)
text.v <- scan(file = "./SupportingMaterials/data/plainText/melville.txt",
               what = "character",
               sep = "\n")
start.v <- which(text.v == "CHAPTER 1. Loomings.")
end.v <- which(text.v == "orphan.")
```

```
novel.lines.v <- text.v[start.v:end.v]
```

3.2 Identify the chapter break positions in the vector using the *grep* function

```
chap.positions.v <- grep("^CHAPTER \\d", novel.lines.v)  
novel.lines.v[chap.positions.v]
```

```
## [1] "CHAPTER 1. Loomings."  
## [2] "CHAPTER 2. The Carpet-Bag."  
## [3] "CHAPTER 3. The Spouter-Inn."  
## [4] "CHAPTER 4. The Counterpane."  
## [5] "CHAPTER 5. Breakfast."  
## [6] "CHAPTER 6. The Street."  
## [7] "CHAPTER 7. The Chapel."  
## [8] "CHAPTER 8. The Pulpit."  
## [9] "CHAPTER 9. The Sermon."  
## [10] "CHAPTER 10. A Bosom Friend."  
## [11] "CHAPTER 11. Nightgown."  
## [12] "CHAPTER 12. Biographical."  
## [13] "CHAPTER 13. Wheelbarrow."  
## [14] "CHAPTER 14. Nantucket."  
## [15] "CHAPTER 15. Chowder."  
## [16] "CHAPTER 16. The Ship."  
## [17] "CHAPTER 17. The Ramadan."  
## [18] "CHAPTER 18. His Mark."  
## [19] "CHAPTER 19. The Prophet."  
## [20] "CHAPTER 20. All Astir."  
## [21] "CHAPTER 21. Going Aboard."  
## [22] "CHAPTER 22. Merry Christmas."  
## [23] "CHAPTER 23. The Lee Shore."  
## [24] "CHAPTER 24. The Advocate."  
## [25] "CHAPTER 25. Postscript."  
## [26] "CHAPTER 26. Knights and Squires."  
## [27] "CHAPTER 27. Knights and Squires."  
## [28] "CHAPTER 28. Ahab."  
## [29] "CHAPTER 29. Enter Ahab; to Him, Stubb."  
## [30] "CHAPTER 30. The Pipe."  
## [31] "CHAPTER 31. Queen Mab."  
## [32] "CHAPTER 32. Cetology."  
## [33] "CHAPTER 33. The Specksnyder."  
## [34] "CHAPTER 34. The Cabin-Table."  
## [35] "CHAPTER 35. The Mast-Head."  
## [36] "CHAPTER 36. The Quarter-Deck."  
## [37] "CHAPTER 37. Sunset."  
## [38] "CHAPTER 38. Dusk."  
## [39] "CHAPTER 39. First Night Watch."  
## [40] "CHAPTER 40. Midnight, Forecastle."  
## [41] "CHAPTER 41. Moby Dick."  
## [42] "CHAPTER 42. The Whiteness of The Whale."  
## [43] "CHAPTER 43. Hark!"  
## [44] "CHAPTER 44. The Chart."  
## [45] "CHAPTER 45. The Affidavit."  
## [46] "CHAPTER 46. Surmises."
```

[47] "CHAPTER 47. The Mat-Maker."
 ## [48] "CHAPTER 48. The First Lowering."
 ## [49] "CHAPTER 49. The Hyena."
 ## [50] "CHAPTER 50. Ahab's Boat and Crew. Fedallah."
 ## [51] "CHAPTER 51. The Spirit-Spout."
 ## [52] "CHAPTER 52. The Albatross."
 ## [53] "CHAPTER 53. The Gam."
 ## [54] "CHAPTER 54. The Town-Ho's Story."
 ## [55] "CHAPTER 55. Of the Monstrous Pictures of Whales."
 ## [56] "CHAPTER 56. Of the Less Erroneous Pictures of Whales, and the True"
 ## [57] "CHAPTER 57. Of Whales in Paint; in Teeth; in Wood; in Sheet-Iron; in"
 ## [58] "CHAPTER 58. Brit."
 ## [59] "CHAPTER 59. Squid."
 ## [60] "CHAPTER 60. The Line."
 ## [61] "CHAPTER 61. Stubb Kills a Whale."
 ## [62] "CHAPTER 62. The Dart."
 ## [63] "CHAPTER 63. The Crotch."
 ## [64] "CHAPTER 64. Stubb's Supper."
 ## [65] "CHAPTER 65. The Whale as a Dish."
 ## [66] "CHAPTER 66. The Shark Massacre."
 ## [67] "CHAPTER 67. Cutting In."
 ## [68] "CHAPTER 68. The Blanket."
 ## [69] "CHAPTER 69. The Funeral."
 ## [70] "CHAPTER 70. The Sphynx."
 ## [71] "CHAPTER 71. The Jeroboam's Story."
 ## [72] "CHAPTER 72. The Monkey-Rope."
 ## [73] "CHAPTER 73. Stubb and Flask Kill a Right Whale; and Then Have a Talk"
 ## [74] "CHAPTER 74. The Sperm Whale's Head--Contrasted View."
 ## [75] "CHAPTER 75. The Right Whale's Head--Contrasted View."
 ## [76] "CHAPTER 76. The Battering-Ram."
 ## [77] "CHAPTER 77. The Great Heidelburgh Tun."
 ## [78] "CHAPTER 78. Cistern and Buckets."
 ## [79] "CHAPTER 79. The Prairie."
 ## [80] "CHAPTER 80. The Nut."
 ## [81] "CHAPTER 81. The Pequod Meets The Virgin."
 ## [82] "CHAPTER 82. The Honour and Glory of Whaling."
 ## [83] "CHAPTER 83. Jonah Historically Regarded."
 ## [84] "CHAPTER 84. Pitchpoling."
 ## [85] "CHAPTER 85. The Fountain."
 ## [86] "CHAPTER 86. The Tail."
 ## [87] "CHAPTER 87. The Grand Armada."
 ## [88] "CHAPTER 88. Schools and Schoolmasters."
 ## [89] "CHAPTER 89. Fast-Fish and Loose-Fish."
 ## [90] "CHAPTER 90. Heads or Tails."
 ## [91] "CHAPTER 91. The Pequod Meets The Rose-Bud."
 ## [92] "CHAPTER 92. Ambergris."
 ## [93] "CHAPTER 93. The Castaway."
 ## [94] "CHAPTER 94. A Squeeze of the Hand."
 ## [95] "CHAPTER 95. The Cassock."
 ## [96] "CHAPTER 96. The Try-Works."
 ## [97] "CHAPTER 97. The Lamp."
 ## [98] "CHAPTER 98. Stowing Down and Clearing Up."
 ## [99] "CHAPTER 99. The Doubloon."
 ## [100] "CHAPTER 100. Leg and Arm."

```
## [101] "CHAPTER 101. The Decanter."
## [102] "CHAPTER 102. A Bower in the Arsacides."
## [103] "CHAPTER 103. Measurement of The Whale's Skeleton."
## [104] "CHAPTER 104. The Fossil Whale."
## [105] "CHAPTER 105. Does the Whale's Magnitude Diminish?--Will He Perish?"
## [106] "CHAPTER 106. Ahab's Leg."
## [107] "CHAPTER 107. The Carpenter."
## [108] "CHAPTER 108. Ahab and the Carpenter."
## [109] "CHAPTER 109. Ahab and Starbuck in the Cabin."
## [110] "CHAPTER 110. Queequeg in His Coffin."
## [111] "CHAPTER 111. The Pacific."
## [112] "CHAPTER 112. The Blacksmith."
## [113] "CHAPTER 113. The Forge."
## [114] "CHAPTER 114. The Gilder."
## [115] "CHAPTER 115. The Pequod Meets The Bachelor."
## [116] "CHAPTER 116. The Dying Whale."
## [117] "CHAPTER 117. The Whale Watch."
## [118] "CHAPTER 118. The Quadrant."
## [119] "CHAPTER 119. The Candles."
## [120] "CHAPTER 120. The Deck Towards the End of the First Night Watch."
## [121] "CHAPTER 121. Midnight.--The Forecastle Bulwarks."
## [122] "CHAPTER 122. Midnight Aloft.--Thunder and Lightning."
## [123] "CHAPTER 123. The Musket."
## [124] "CHAPTER 124. The Needle."
## [125] "CHAPTER 125. The Log and Line."
## [126] "CHAPTER 126. The Life-Buoy."
## [127] "CHAPTER 127. The Deck."
## [128] "CHAPTER 128. The Pequod Meets The Rachel."
## [129] "CHAPTER 129. The Cabin."
## [130] "CHAPTER 130. The Hat."
## [131] "CHAPTER 131. The Pequod Meets The Delight."
## [132] "CHAPTER 132. The Symphony."
## [133] "CHAPTER 133. The Chase--First Day."
## [134] "CHAPTER 134. The Chase--Second Day."
## [135] "CHAPTER 135. The Chase.--Third Day."
```

```
chap.positions.v
```

```
## [1] 1 185 301 790 925 989 1062 1141 1222 1524 1654 1712
## [13] 1785 1931 1996 2099 2572 2766 2887 2997 3075 3181 3323 3357
## [25] 3506 3532 3635 3775 3893 3993 4018 4084 4532 4619 4805 5023
## [37] 5273 5315 5347 5371 5527 5851 6170 6202 6381 6681 6771 6856
## [49] 7201 7274 7360 7490 7550 7689 8379 8543 8656 8742 8828 8911
## [61] 9032 9201 9249 9293 9555 9638 9692 9754 9854 9894 9971 10175
## [73] 10316 10502 10639 10742 10816 10876 11016 11097 11174 11541 11638 11706
## [85] 11778 11947 12103 12514 12620 12745 12843 13066 13148 13287 13398 13440
## [97] 13592 13614 13701 13900 14131 14279 14416 14495 14620 14755 14835 14928
## [109] 15066 15148 15339 15377 15462 15571 15631 15710 15756 15798 15873 16095
## [121] 16113 16164 16169 16274 16382 16484 16601 16671 16790 16839 16984 17024
## [133] 17160 17473 17761
```

```
novel.lines.v <- c(novel.lines.v,
  "END")
last.position.v <- length(novel.lines.v)
chap.positions.v <- c(chap.positions.v,
```

```

                                last.position.v)
chap.positions.v

##      [1]      1   185   301   790   925   989  1062  1141  1222  1524  1654  1712
##    [13]  1785  1931  1996  2099  2572  2766  2887  2997  3075  3181  3323  3357
##    [25]  3506  3532  3635  3775  3893  3993  4018  4084  4532  4619  4805  5023
##    [37]  5273  5315  5347  5371  5527  5851  6170  6202  6381  6681  6771  6856
##    [49]  7201  7274  7360  7490  7550  7689  8379  8543  8656  8742  8828  8911
##    [61]  9032  9201  9249  9293  9555  9638  9692  9754  9854  9894  9971 10175
##    [73] 10316 10502 10639 10742 10816 10876 11016 11097 11174 11541 11638 11706
##    [85] 11778 11947 12103 12514 12620 12745 12843 13066 13148 13287 13398 13440
##    [97] 13592 13614 13701 13900 14131 14279 14416 14495 14620 14755 14835 14928
##   [109] 15066 15148 15339 15377 15462 15571 15631 15710 15756 15798 15873 16095
##   [121] 16113 16164 16169 16274 16382 16484 16601 16671 16790 16839 16984 17024
##   [133] 17160 17473 17761 18170

```

4 The *for* Loop and *if* Conditional