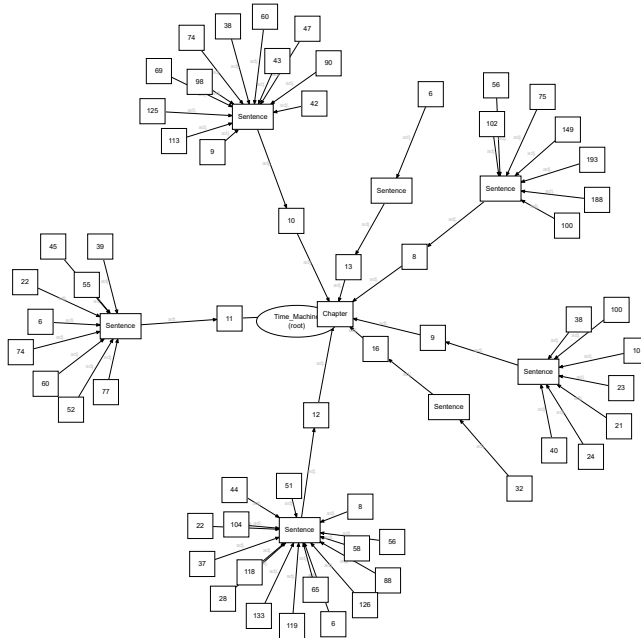# True Number

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Assignment Part 1: Text Analysis with Truenumbers
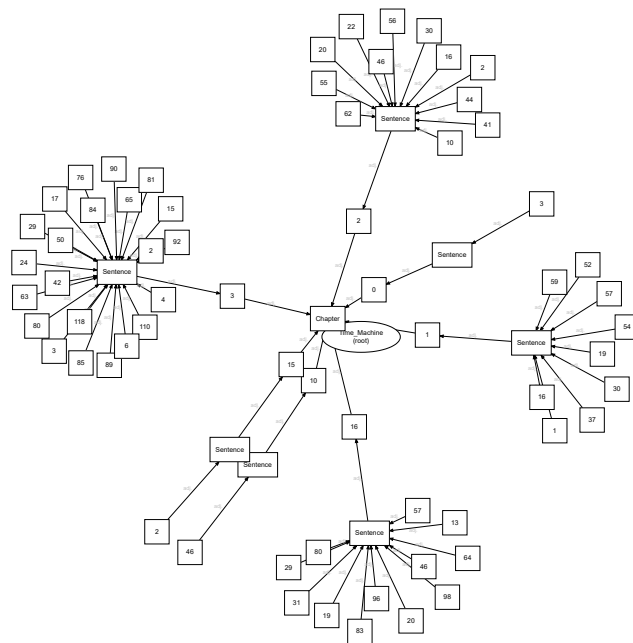
```
## Returned 53 results
```


Graph of "Weena"'s path list - Summary of Weena's story

Weena is an Eloi(One of the two made up races in the book) girl, who is an important character in the Time Machine. From the Path list graph we can see in this book, "Weena" appears most in Chapter 10 and 12. Her name was mentioned in Chapter 8, sentence 56, "Then I tried talk, and found that her name was Weena, which, though I don't know what it meant, somehow seemed appropriate enough." for the first time. At Chapter 16, sentence 32, "He spoke like one who was trying to keep hold of an idea that eluded him. 'They were put into my pocket by Weena, when I travelled into Time.'", her name was mentioned for the last time. In this book, Weena once nearly drown in the river, the time traveller saved her, when another Eloi just stand by. Weena made a garland of flower for the time traveller as gift, and joined his expedition to take back his time machine. Before the time traveller seize his time machine back, they were surrounded by the Morlocks, during the fighting, Weena was sperated with the time traveller, and lost in the forest fire set by the time traveller. In Chapter 16, sentence 32, which is the last sentence Weena's name appeared in the book, the time traveller found the flowers in his pocket, which were put by Weena. This is the main experience and story of Weena in the Time Machine.

```
## Returned 58 results
```

Graph of "time traveller"'s path list - Summary of time traveller's story

The time traveller is introducing to other people in his house at the beginning of the story, he talked about that he believes time exists in the fourth dimension. During the conversation, he took out a tiny clock size machine and shown its function to the other people, it's a time machine. After impressed his guest, he introduce them the larger version of the time machine.

When his guest return to his home a week later, they found the time traveller was dusty and in a disheveled situation, he told them the story about his time travelling expereince.

After he turned on his time machine, he found that he was bring to the future, and landed in the year 802701 A.D. He noticed he was surrounded by figures speaking in a language he does not understand but finds pleasant nonetheless. Those figures have curly hair and large eyes, looks thin and beautiful. Those are the Elois.

When the time traveller return to the place where is his time machine after the night falls, he found that the machine is disappeared. When he is finding his machine in Elois' society, he noticed they are decadent and offish. When he discovered and rescue an Eloi woman called Weena in a river, all the other Elois just stand by.
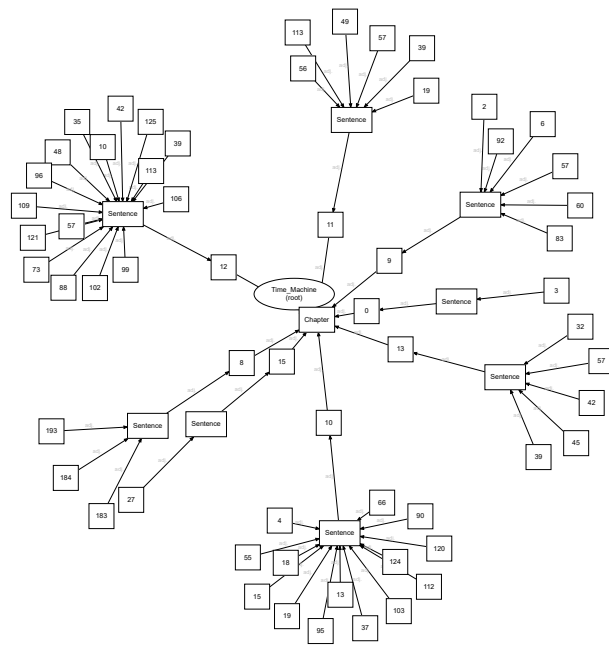
In the following days, he found that the speices that took away his machine is called Morlocks, they were look like apes, and scary the Elois a lot. They live underground and only appear in surface ground after the nights fall. To take his time machine back, the time traveller decides go to the underground world.

With Weena's accompany, the time traveller reach the palace of green porcelain, and break a lever off a machine to operate his time machine.
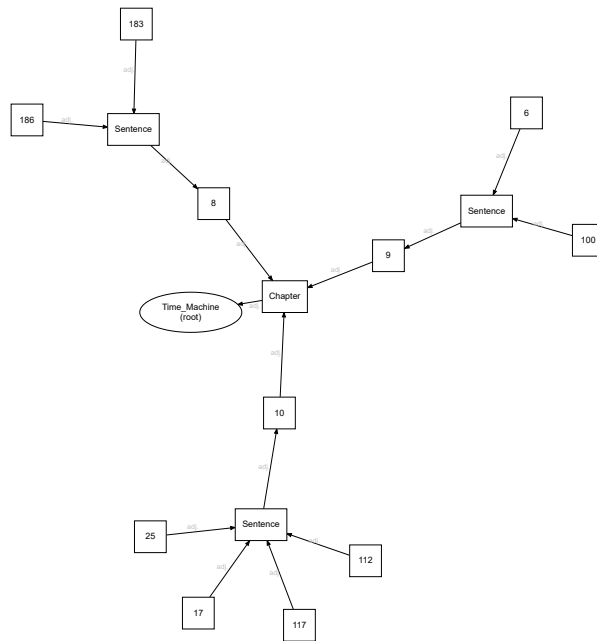
When the night comes again, the time traveller and Weena are attempting to accross the forest. He start a fire in the forest to stop the Morlocks, but they found they were surrounded by the Morlocks. During fight, Weena was sperated with the time traveller, and lost in the forest fire. Under Morlocks' attack, the time traveller finally enter his time machine and go back to his time. When he get out of the machine, he found that his guests are waiting for him.

At the end of the time, the narrator told the readers the story was happened three years ago, after that, no one seen the time traveller anymore. Theyonly has two, dried out flowers that Weena gave to the time traveller in the future to prove this incredible story.

```
## Returned 52 results
```

```
## Returned 8 results
```


Graph of "Morlock"'s and "Eloi"'s path list - Summary of the two species

Morlocks is one of the two made up species in the Time Machine, the looks like apes, and lives in their underground homes. When the night falls, they will appear on the surface world and kill the Elois, the time traveller thinks they eat the Elois. They have more drama in the whole books since they are the enemies of the time traveller during his journey to take his time machine back.

Conclusion

So from this project, we used the tnum package to help us take a quick look of the book instead of reading it. We use the main characters given, and search for the other main characters or groups in the book and use them as key words to search their relative sentences in the book to take a brief view about what they done and experienced in the book. During this process, we met some problems such as "the Narrator", which is one of the characters in this book, can't be found through tnum.query function. Also, it seems a hundred percent that in the book, the author used pronouns instead of the names of the characters, this will make us miss some sentences that the characters appeared. Although there are many problems, we still can use this package and dataset to build a basic understanding about the story of the Time Machine.

Assignment part 2: Analysis of Numeric Data with Truenumbers

Choose 10 truenumber

```
x1 <- tnum.query("subj:Connecticut* and prop:population:bachelors and numval: >1000")
```

```
## Returned 8 results
```

```
x1_tag <- mapply(FUN = tnum.addTag, guid = x1$id,
                 tag = "pop bachelors:large",
                 text = "the population of bachelors in Connecticut")
tnum.getTagsOfTn(x1[1,]$id)
```

```
## [1] "county:bachelors population"  "lowest_bachelors_Connecticut"
## [3] "pop bachelors:large"
```

```
kable(x1)
```

```
## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("22745", : provided 5 variables to replace 1 variables

## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("22745", : provided 5 variables to replace 1 variables
```

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:39:58.468Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Tolland	Connecticut:County:T population:bachelors
2022-10-26T18:39:55.198Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Middlesex	Connecticut:County: has population:bach 28160
2022-10-26T18:39:57.379Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:New_London	Connecticut:County: has population:bach 34499
2022-10-26T18:39:54.110Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Litchfield	Connecticut:County: population:bachelors
2022-10-26T18:39:56.294Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:New_Haven	Connecticut:County: has population:bach 111165
2022-10-26T18:39:59.548Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Windham	Connecticut:County:W has population:bach 12037
2022-10-26T18:39:51.925Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Fairfield	Connecticut:County: population:bachelors
2022-10-26T18:39:53.019Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Hartford	Connecticut:County: population:bachelors

```
x2 <- tnum.query("subj:Maine* and prop:population:bachelors and numval: >1000")
```

```
## Returned 16 results
```

```
x2_tag <- mapply(FUN = tnum.addTag, guid = x2$id,
                 tag = "pop bachelors:large",
                 text = "the population of bachelors in Maine")
tnum.getTagsOfTn(x2[1,]$id)
```

```
## [1] "pop bachelors:large"
```

```
kable(x2)
```

```
## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("1659", : provided 5 variables to replace 1 variables

## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("1659", : provided 5 variables to replace 1 variables
```

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:11.664Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Piscataquis	Maine:County:Piscataquis has population:bachelors 1659
2022-10-26T18:40:01.801Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Aroostook	Maine:County:Aroostook has population:bachelors 6606
2022-10-26T18:40:17.145Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:York	Maine:County:York has population:bachelors = 32107
2022-10-26T18:40:07.306Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Knox	Maine:County:Knox has population:bachelors = 6348
2022-10-26T18:40:05.084Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Hancock	Maine:County:Hancock has population:bachelors = 8328
2022-10-26T18:40:03.987Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Franklin	Maine:County:Franklin has population:bachelors = 3370
2022-10-26T18:40:16.068Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Washington	Maine:County:Washington has population:bachelors 3251
2022-10-26T18:40:06.221Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Kennebec	Maine:County:Kennebec has population:bachelors 15073
2022-10-26T18:40:08.387Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Lincoln	Maine:County:Lincoln has population:bachelors = 48
2022-10-26T18:40:13.892Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Somerset	Maine:County:Somerset has population:bachelors 4368
2022-10-26T18:40:02.897Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Cumberland	Maine:County:Cumberland has population:bachelors 61773
2022-10-26T18:40:00.715Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Androscoggin	Maine:County:Androscoggin has population:bachelors 11335
2022-10-26T18:40:12.768Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Sagadahoc	Maine:County:Sagadahoc has population:bachelors 5558

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:09.472Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Oxford	Maine:County:Oxford has population:bachelors = 5456
2022-10-26T18:40:14.978Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Waldo	Maine:County:Waldo has population:bachelors = 5876
2022-10-26T18:40:10.570Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Penobscot	Maine:County:Penobscot has population:bachelors 18842

```
x3 <- tnum.query("subj:Massachusetts* and prop:population:bachelors and numval: >1000")
```

```
## Returned 14 results
```

```
x3_tag <- mapply(FUN = tnum.addTag, guid = x3$id,
                 tag = "pop bachelors:large",
                 text = "the population of bachelors in Massachusetts")
tnum.getTagsOfTn(x1[3,]$id)
```

```
## [1] "county:bachelors population"  "lowest_bachelors_Connecticut"
## [3] "pop bachelors:large"
```

```
kable(x3)
```

```
## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("85080", : provided 5 variables to replace 1 variables

## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("85080", : provided 5 variables to replace 1 variables
```

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:30.218Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Plymouth	Massachusetts:Cou has population:bach
2022-10-26T18:40:32.399Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Worcester	Massachusetts:Cou has population:bach 124955
2022-10-26T18:40:20.384Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Bristol	Massachusetts:Cou population:bachelor
2022-10-26T18:40:25.904Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Hampshire	Massachusetts:Cou has population:bach
2022-10-26T18:40:26.975Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Middlesex	Massachusetts:Cou has population:bach 308958
2022-10-26T18:40:23.684Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Franklin	Massachusetts:Cou has population:bach

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:22.599Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Essex	Massachusetts:Cou population:bachelor
2022-10-26T18:40:31.297Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Suffolk	Massachusetts:Cou has population:bach 140212
2022-10-26T18:40:18.222Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Barnstable	Massachusetts:Cou has population:bach
2022-10-26T18:40:28.065Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Nantucket	Massachusetts:Cou has population:bach
2022-10-26T18:40:24.774Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Hampden	Massachusetts:Cou has population:bach
2022-10-26T18:40:19.301Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Berkshire	Massachusetts:Cou has population:bach
2022-10-26T18:40:21.514Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Dukes	Massachusetts:Cou population:bachelor
2022-10-26T18:40:29.139Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Norfolk	Massachusetts:Cou has population:bach 140563

```
x4 <- tnum.query("subj:New_Hampshire* and prop:population:bachelors and numval: >1000")
```

```
## Returned 10 results
```

```
x4_tag <- mapply(FUN = tnum.addTag, guid = x4$id,
                 tag = "pop bachelors:large",
                 text = "the population of bachelors in New Hampshire")
tnum.getTagsOfTn(x4[1,]$id)
```

```
## [1] "pop bachelors:large"
```

```
kable(x4)
```

```
## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("8019", : provided 5 variables to replace 1 variables

## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("8019", : provided 5 variables to replace 1 variables
```

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:34.548Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Carroll	New_Hampshire population:bache
2022-10-26T18:40:36.770Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Coos	New_Hampshire population:bache

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:43.314Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Sullivan	New_Hampshire population:bache
2022-10-26T18:40:38.949Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Hillsborough	New_Hampshire has population:b
2022-10-26T18:40:42.229Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Strafford	New_Hampshire has population:b
2022-10-26T18:40:35.670Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Cheshire	New_Hampshire has population:b
2022-10-26T18:40:41.137Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Rockingham	New_Hampshire has population:b
2022-10-26T18:40:33.476Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Belknap	New_Hampshire population:bache
2022-10-26T18:40:37.858Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Grafton	New_Hampshire population:bache
2022-10-26T18:40:40.056Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Merrimack	New_Hampshire has population:b

```
x5 <- tnum.query("subj:Rhode_Island* and prop:population:bachelors and numval: >1000")
```

```
## Returned 5 results
```

```
x5_tag <- mapply(FUN = tnum.addTag, guid = x5$id,
                 tag = "pop bachelors:large",
                 text = "the population of bachelors in Rhode Island")
tnum.getTagsOfTn(x5[1,]$id)
```

```
## [1] "pop bachelors:large"
```

```
kable(x5)
```

```
## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("8679", : provided 5 variables to replace 1 variables

## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("8679", : provided 5 variables to replace 1 variables
```

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:44.397Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Rhode_Island:County:Bristol	Rhode_Island:Coun population:bachelors
2022-10-26T18:40:45.510Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Rhode_Island:County:Kent	Rhode_Island:Coun population:bachelors

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:46.662Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Rhode_Island:County:Newport	Rhode_Island:Coun has population:bach
2022-10-26T18:40:47.827Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Rhode_Island:County:Providence	Rhode_Island:Coun has population:bach
2022-10-26T18:40:48.999Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Rhode_Island:County:Washington	Rhode_Island:Coun has population:bach

```
x6 <- tnum.query("subj:Connecticut* and prop:households and numval: >1000")
```

```
## Returned 8 results
```

```
x6_tag <- mapply(FUN = tnum.addTag, guid = x6$id,
                 tag = "households:large",
                 text = "the households in Connecticut")
tnum.getTagsOfTn(x6[1,]$id)
```

```
## [1] "C_pophouseholds_1k" "county:Households" "households:large"
```

```
kable(x6)
```

```
## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("340189", : provided 5 variables to replace 1 variables

## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("340189", : provided 5 variables to replace 1 variables
```

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:39:51.525Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Fairfield	Connecticut:County: households = 34018
2022-10-26T18:39:53.706Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Litchfield	Connecticut:County: households = 74143
2022-10-26T18:39:58.073Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Tolland	Connecticut:County:1 households = 55683
2022-10-26T18:39:59.146Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Windham	Connecticut:County:1 has households = 44
2022-10-26T18:39:56.977Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:New_London	Connecticut:County: has households = 10
2022-10-26T18:39:55.886Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:New_Haven	Connecticut:County: has households = 33
2022-10-26T18:39:54.785Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Middlesex	Connecticut:County: has households = 66

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:39:52.618Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Connecticut:County:Hartford	Connecticut:County: households = 35040

```
x7 <- tnum.query("subj:Maine* and prop:households and numval: >1000")
```

```
## Returned 16 results
```

```
x7_tag <- mapply(FUN = tnum.addTag, guid = x7$id,
                 tag = "households:large",
                 text = "the households in Maine")
tnum.getTagsOfTn(x7[1,]$id)
```

```
## [1] "M_pophouseholds_1k"     "Maine_pophouseholds_1k" "households:large"
```

```
kable(x7)
```

```
## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("21321", : provided 5 variables to replace 1 variables

## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("21321", : provided 5 variables to replace 1 variables
```

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:13.495Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Somerset	Maine:County:Somerset has households = 21321
2022-10-26T18:40:12.354Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Sagadahoc	Maine:County:Sagadahoc has households = 15980
2022-10-26T18:40:04.681Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Hancock	Maine:County:Hancock has households = 23661
2022-10-26T18:40:10.173Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Penobscot	Maine:County:Penobscot has households = 62156
2022-10-26T18:40:14.580Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Waldo	Maine:County:Waldo has households = 17236
2022-10-26T18:40:16.745Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:York	Maine:County:York has households = 85314
2022-10-26T18:40:07.988Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Lincoln	Maine:County:Lincoln has households = 15336
2022-10-26T18:40:03.591Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Franklin	Maine:County:Franklin has households = 11848
2022-10-26T18:40:11.265Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Piscataquis	Maine:County:Piscataquis has households = 7025

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:00.314Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Androscoggin	Maine:County:Androscogg has households = 45630
2022-10-26T18:40:15.668Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Washington	Maine:County:Washington has households = 13791
2022-10-26T18:40:05.766Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Kennebec	Maine:County:Kennebec has households = 52105
2022-10-26T18:40:02.501Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Cumberland	Maine:County:Cumberland has households = 120644
2022-10-26T18:40:06.902Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Knox	Maine:County:Knox has households = 17020
2022-10-26T18:40:01.404Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Aroostook	Maine:County:Aroostook has households = 29516
2022-10-26T18:40:09.071Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Maine:County:Oxford	Maine:County:Oxford has households = 21338

```
x8 <- tnum.query("subj:Massachusetts* and prop:households and numval: >1000")
```

```
## Returned 14 results
```

```
x8_tag <- mapply(FUN = tnum.addTag, guid = x8$id,
                 tag = "households:large",
                 text = "the households in Massachusetts")
tnum.getTagsOfTn(x8[1,]$id)
```

```
## [1] "M_pophouseholds_1k"   "Mas_pophouseholds_1k" "households:large"
```

```
kable(x8)
```

```
## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("217912", : provided 5 variables to replace 1 variables

## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("217912", : provided 5 variables to replace 1 variables
```

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:19.985Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Bristol	Massachusetts:Cou households = 21791
2022-10-26T18:40:31.998Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Worcester	Massachusetts:Cou has households = 3
2022-10-26T18:40:25.507Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Hampshire	Massachusetts:Cou has households = 5

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:30.901Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Suffolk	Massachusetts:Cou has households = 3
2022-10-26T18:40:29.819Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Plymouth	Massachusetts:Cou has households = 1
2022-10-26T18:40:17.823Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Barnstable	Massachusetts:Cou has households = 9
2022-10-26T18:40:27.667Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Nantucket	Massachusetts:Cou has households = 3
2022-10-26T18:40:26.580Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Middlesex	Massachusetts:Cou has households = 6
2022-10-26T18:40:22.201Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Essex	Massachusetts:Cou households = 29420
2022-10-26T18:40:21.117Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Dukes	Massachusetts:Cou households = 6765
2022-10-26T18:40:28.743Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Norfolk	Massachusetts:Cou has households = 2
2022-10-26T18:40:24.372Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Hampden	Massachusetts:Cou has households = 1
2022-10-26T18:40:23.289Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Franklin	Massachusetts:Cou has households = 3
2022-10-26T18:40:18.901Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Massachusetts:County:Berkshire	Massachusetts:Cou has households = 5

```
x9 <- tnum.query("subj:New_Hampshire* and prop:households and numval: >1000")
```

```
## Returned 10 results
```

```
x9_tag <- mapply(FUN = tnum.addTag, guid = x9$id,
                 tag = "households:large",
                 text = "the households in New Hampshire")
tnum.getTagsOfTn(x9[1,]$id)
```

```
## [1] "NH_pophouseholds_1k"        "household:NH:small(Group 10)"
## [3] "household:small"            "households:large"
```

```
kable(x9)
```

```
## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("13768", : provided 5 variables to replace 1 variables

## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("13768", : provided 5 variables to replace 1 variables
```

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:36.372Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Coos	New_Hampshire households = 13
2022-10-26T18:40:37.460Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Grafton	New_Hampshire households = 34
2022-10-26T18:40:33.081Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Belknap	New_Hampshire households = 25
2022-10-26T18:40:34.154Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Carroll	New_Hampshire households = 21
2022-10-26T18:40:41.829Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Strafford	New_Hampshire has households
2022-10-26T18:40:39.645Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Merrimack	New_Hampshire has households
2022-10-26T18:40:38.551Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Hillsborough	New_Hampshire has households
2022-10-26T18:40:42.917Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Sullivan	New_Hampshire households = 17
2022-10-26T18:40:35.230Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Cheshire	New_Hampshire has households
2022-10-26T18:40:40.739Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	New_Hampshire:County:Rockingham	New_Hampshire has households

```
x10 <- tnum.query("subj:Rhode_Island* and prop:households and numval: >1000")
```

```
## Returned 5 results
```

```
x10_tag <- mapply(FUN = tnum.addTag, guid = x10$id,
                  tag = "households:large",
                  text = "the households in Rhode Island")
tnum.getTagsOfTn(x10[1,]$id)
```

```
## [1] "household:RI:small(Group 10)" "households:large"
```

```
kable(x10)
```

```
## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("19217", : provided 5 variables to replace 1 variables

## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("19217", : provided 5 variables to replace 1 variables
```

date	html_varname	server	quantity	author	subject	wrapper
2022-10-26T18:40:43.990Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Rhode_Island:County:Bristol	Rhode_Island:Coun households = 19217
2022-10-26T18:40:45.086Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Rhode_Island:County:Kent	Rhode_Island:Coun households = 69422
2022-10-26T18:40:46.239Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Rhode_Island:County:Newport	Rhode_Island:Coun has households = 34
2022-10-26T18:40:47.398Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Rhode_Island:County:Providence	Rhode_Island:Coun has households = 23
2022-10-26T18:40:48.571Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	magnitude	aohara1	Rhode_Island:County:Washington	Rhode_Island:Coun has households = 49

Post statement

```
state1 <- tnum.postStatement(
  stmt = "the largest population of bachelors of Connecticut at New London County is 34499",
  notes = "Our first truenumber")

state2 <- tnum.postStatement(
  stmt = "the largest population of bachelors of Maine at Cumberland County is 61773",
  notes = "Our fourth truenumber")

state3 <- tnum.postStatement(
  stmt = "the largest population of bachelors of Massachusetts at Worcester County is 124955",
  notes = "Our third truenumber")

state4 <- tnum.postStatement(
  stmt = "the largest population of bachelors of New Hampshire at Hillsboroug County is 70773",
  notes = "Our fifth truenumber")

state5 <- tnum.postStatement(
  stmt = "the largest population of bachelors of Rhode Island at Providence County is 76172",
  notes = "Our second truenumber")

state6 <- tnum.postStatement(
  stmt = "the highest households of Connecticut at Hartford County is 350408",
  notes = "Our sixth truenumber")

state7 <- tnum.postStatement(
  stmt = "the highest households of Maine at Cumberland County is 120644",
  notes = "Our seventh truenumber")

state8 <- tnum.postStatement(
  stmt = "the highest households of Massachusetts at Middlesex County is 604384",
  notes = "Our eighth truenumber")

state9 <- tnum.postStatement(
  stmt = "the highest households of New Hampshire at Hillsborough County is 161086",
  notes = "Our ninth truenumber")

state10 <- tnum.postStatement(
  stmt = "the highest households of Rhode Island at Providence County is 237971",
  notes = "Our tenth truenumber")
```

```
df <- tnum.jsonArray(list(state1, state2, state3, state4, state5, state6, state7, state8, state9, state10))
kable(df)
```

```
## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("34499", : provided 5 variables to replace 1 variables

## Warning in `[<-.data.frame`(`*tmp*`, , j, value = structure(list(mag =
## structure(c("34499", : provided 5 variables to replace 1 variables
```

date	html_varname	server	notes	quantity	author	subject
2022-11-11T02:18:07.290Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	Our first truenumber	magnitude	runcihu	County:London:New:at:Connecticut/bachelo
2022-11-11T02:18:07.652Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	Our fourth truenumber	magnitude	runcihu	County:Cumberland:at:Maine/bachelors
2022-11-11T02:18:07.932Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	Our third truenumber	magnitude	runcihu	County:Worcester:at:Massachusetts/bachelo
2022-11-11T02:18:08.221Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	Our fifth truenumber	magnitude	runcihu	County:Hillsboroug:at:Hampshire:New/bach
2022-11-11T02:18:08.505Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	Our second truenumber	magnitude	runcihu	County:Providence:at:Island:Rhode/bachelo
2022-11-11T02:18:08.771Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	Our sixth truenumber	magnitude	runcihu	County:Hartford:at:Connecticut
2022-11-11T02:18:09.038Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	Our seventh truenumber	magnitude	runcihu	County:Cumberland:at:Maine
2022-11-11T02:18:09.305Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	Our eighth truenumber	magnitude	runcihu	County:Middlesex:at:Massachusetts

date	html_varname	server	notes	quantity	author	subject
2022-11-11T02:18:09.579Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	Our ninth truenumber	magnitude	runcihu	County:Hillsborough:at:Hampshire:New
2022-11-11T02:18:09.862Z		http://mssp.truenum.com:8080/Numberflow/ (http://mssp.truenum.com:8080/Numberflow/)	Our tenth truenumber	magnitude	runcihu	County:Providence:at:Island:Rhode