

# Ontologies

```
DF<-read.csv(file.path(data_dir,data_file_name),stringsAsFactors = FALSE)
# DF$Reduced_Activities_QC1
#write.csv(DF, 'All.csv')
```

```
# DF$Reduced_Ontology_One<- DF$Ontology_One
# DF$Reduced_Ontology_Two<- DF$Ontology_Two
# DF$Reduced_Ontology_Three<- DF$Ontology_Three
```

```
# R= '~CR$|~PR$'
# W = '~CW$|~PW$'
# I = '~PI|~VI'
# Out = '~Out$'
# SP = '~SP$'
# SA = '~ELD$|~EiP$'
# Thinking = '~T$'
```

```
# DF$Reduced_Ontology_One<-case_when(
#
#           str_detect(DF$Ontology_One, Out)~"Out",
#           str_detect(DF$Ontology_One, W)~"W",
#           str_detect(DF$Ontology_One, R)~"R",
#           str_detect(DF$Ontology_One, Thinking)~"T",
#           str_detect(DF$Ontology_One, SP)~"SP",
#           str_detect(DF$Ontology_One, SA)~"SA",
#           str_detect(DF$Ontology_One, I)~"I")
#
# DF$Reduced_Ontology_Two<-case_when(
#
#           str_detect(DF$Ontology_Two, Out)~"Out",
#           str_detect(DF$Ontology_Two, W)~"W",
#           str_detect(DF$Ontology_Two, R)~"R",
#           str_detect(DF$Ontology_Two, Thinking)~"T",
#           str_detect(DF$Ontology_Two, SP)~"SP",
#           str_detect(DF$Ontology_Two, SA)~"SA",
#           str_detect(DF$Ontology_Two, I)~"I")
#
# DF$Reduced_Ontology_Three<-case_when(
#
#           str_detect(DF$Ontology_Three, Out)~"Out",
#           str_detect(DF$Ontology_Three, W)~"W",
#           str_detect(DF$Ontology_Three, R)~"R",
#           str_detect(DF$Ontology_Three, Thinking)~"T",
#           str_detect(DF$Ontology_Three, SP)~"SP",
#           str_detect(DF$Ontology_Three, SA)~"SA",
#           str_detect(DF$Ontology_Three, I)~"I")
#
#
#
```

```

# DF$Reduced_Ontology_One[is.na(DF$Reduced_Ontology_One)] <- ""
# DF$Reduced_Ontology_Two[is.na(DF$Reduced_Ontology_Two)] <- ""
# DF$Reduced_Ontology_Three[is.na(DF$Reduced_Ontology_Three)] <- ""
#
# DF$Reduce_Activities<-paste(DF$Reduced_Ontology_One,DF$Reduced_Ontology_Two,DF$Reduced_Ontology_Thr
# DF<-DF%>%mutate(Reduce_Activities_QC1=gsub("(\\+)*$", "", Reduce_Activities))
#

#####-----Change the plot directory -----#####
# plot_location<-"C:/Users/soton/Documents/R/DeadlineProject/Plots/Combined/Version13/"
#####-----Change the plot directory -----#####

#Day_DF<-subset(DF, Participant_ID=="T015" & DF$Treatment=="WS" & Day=="Day4")
#Title = "Test"
legend_heatmap<-NULL
legend_timeline<-NULL
subject_name_list<-levels(factor(DF$Participant_ID))

#Timeline_Heatmap_list<-list()
final_list<-list()

SubjectID<-factor(DF$Participant_ID)
# SubjectID=c('T005')
numberSid=nlevels(SubjectID)
numberSid=2
for (i in 1:numberSid) {
  Timeline_Heatmap_list<-list()
  DF_Sub<-subset(DF, Participant_ID==levels(SubjectID)[i] & DF$Treatment=="WS")
  subject_title=levels(SubjectID)[i]

  Day_No<-factor(DF_Sub$Day)
  numberOfDay=nlevels(Day_No)

  for (j in 1:numberOfDay) {
    Title=levels(Day_No)[j]
    Day_DF<-subset(DF_Sub, Day==levels(Day_No)[j])
    Day_DF<-Day_DF[!is.na(Day_DF$Reduced_Activities_QC1),]
    Day_DF<-Day_DF[!is.na(Day_DF$Reduced_Activity_One),]
    Draw_Timeline_Heatmap(Day_DF, Title)

  }

#final_list=ggarrange(plotlist = Timeline_Heatmap_list, nrow = 4, ncol = 2, align = c("hv"), common
plots=ggarrange(plotlist = Timeline_Heatmap_list, nrow = 4, ncol = 2)
#final_list
legend_merge<-plot_grid(legend_timeline, legend_heatmap, ncol = 2, nrow = 1)
legends_of_plots<-plot_grid(plots,legend_merge, ncol = 1, rel_heights = c(1, .05))
title <- ggdraw() + draw_label(subject_title, fontface='bold')
final_plot<-plot_grid(title,legends_of_plots, ncol = 1, rel_heights = c(.03, 1))
final_plot
final_list[[length(final_list) + 1]] <- final_plot

```

```

full_path<-file.path(plot_location,paste(subject_name_list[i],".pdf",sep=""))
ggsave(full_path, final_plot, width = 8.5, height = 11, units = "in")
}

```

```

## [1] "11111111111111111111"
##
##      I      Out      R  SA+R SA+SP      SP      W
## 3920 1135 5325 1080 275 120 3601

## Warning: Removed 14101 rows containing missing values (geom_point).

## Warning: Removed 15456 rows containing missing values (geom_point).

## Warning: Removed 14101 rows containing missing values (geom_point).

## Warning: Removed 15456 rows containing missing values (geom_point).

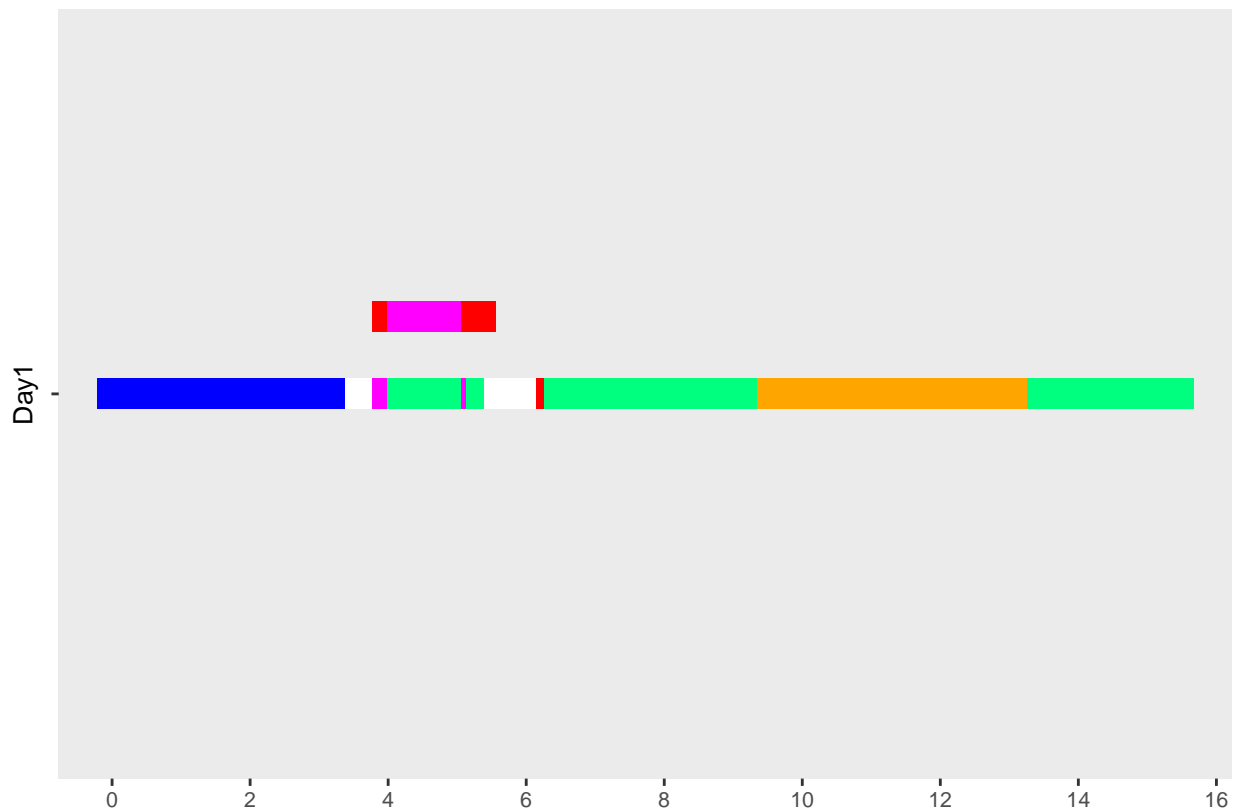
## [1] "after timeline"
## [1] "Before Heatmap calling"
## [1] "Entered"
## [1] "R"      "W"      "Out"    "SA"     "SP"     "I"

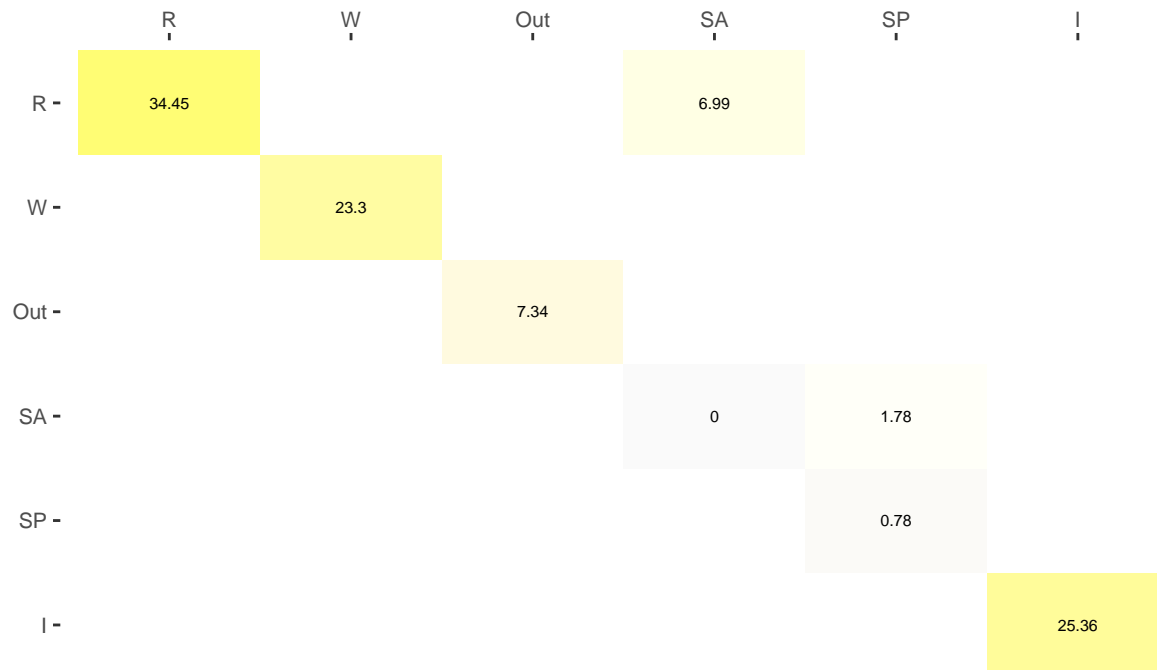
## Warning: Expected 2 pieces. Missing pieces filled with `NA` in 14101 rows [1, 2,
## 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, ...].

## [1] "I am before rest of Ontologies"

## Warning: Ignoring unknown parameters: face

```





```
## [1] "after calling"
## [1] "11111111111111111111"
##
##      I  Out    R  R+I R+SA SA+I    W
## 5355 2191  530 1790  438  730 6197

## Warning: Removed 14273 rows containing missing values (geom_point).

## Warning: Removed 17231 rows containing missing values (geom_point).

## Warning: Removed 14273 rows containing missing values (geom_point).

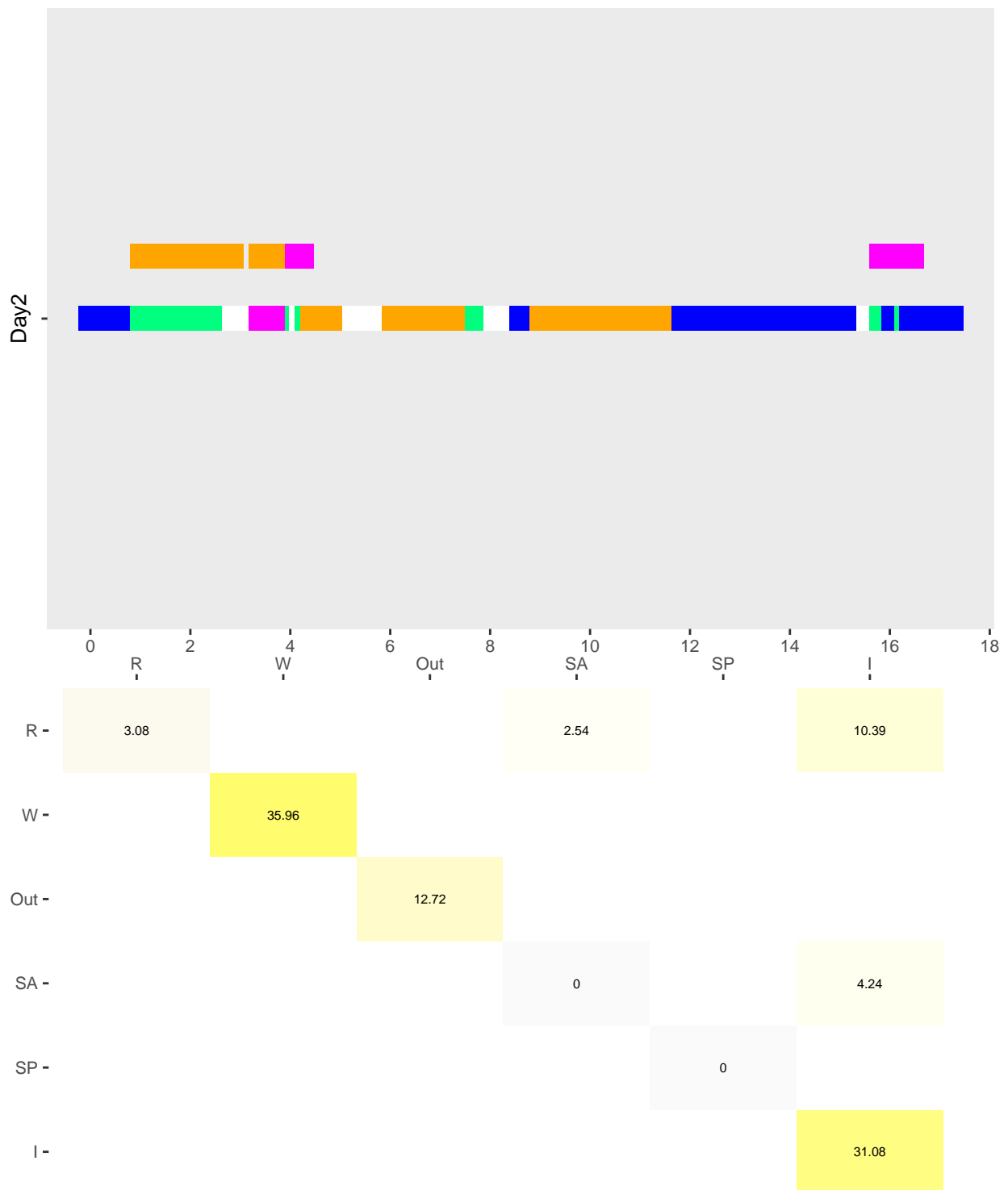
## Warning: Removed 17231 rows containing missing values (geom_point).

## [1] "after timeline"
## [1] "Before Heatmap calling"
## [1] "Entered"
## [1] "R"    "W"    "Out"  "SA"   "SP"   "I"

## Warning: Expected 2 pieces. Missing pieces filled with `NA` in 14273 rows [1, 2,
## 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, ...].

## [1] "I am before rest of Ontologies"

## Warning: Ignoring unknown parameters: face
```



```
## [1] "after calling"
## [1] "11111111111111111111"
##
##      I    Out      R  R+SA  SA+SP      W
## 4955 1069 4156   581   250   940

## Warning: Removed 11120 rows containing missing values (geom_point).
```

```
## Warning: Removed 11951 rows containing missing values (geom_point).

## Warning: Removed 11120 rows containing missing values (geom_point).

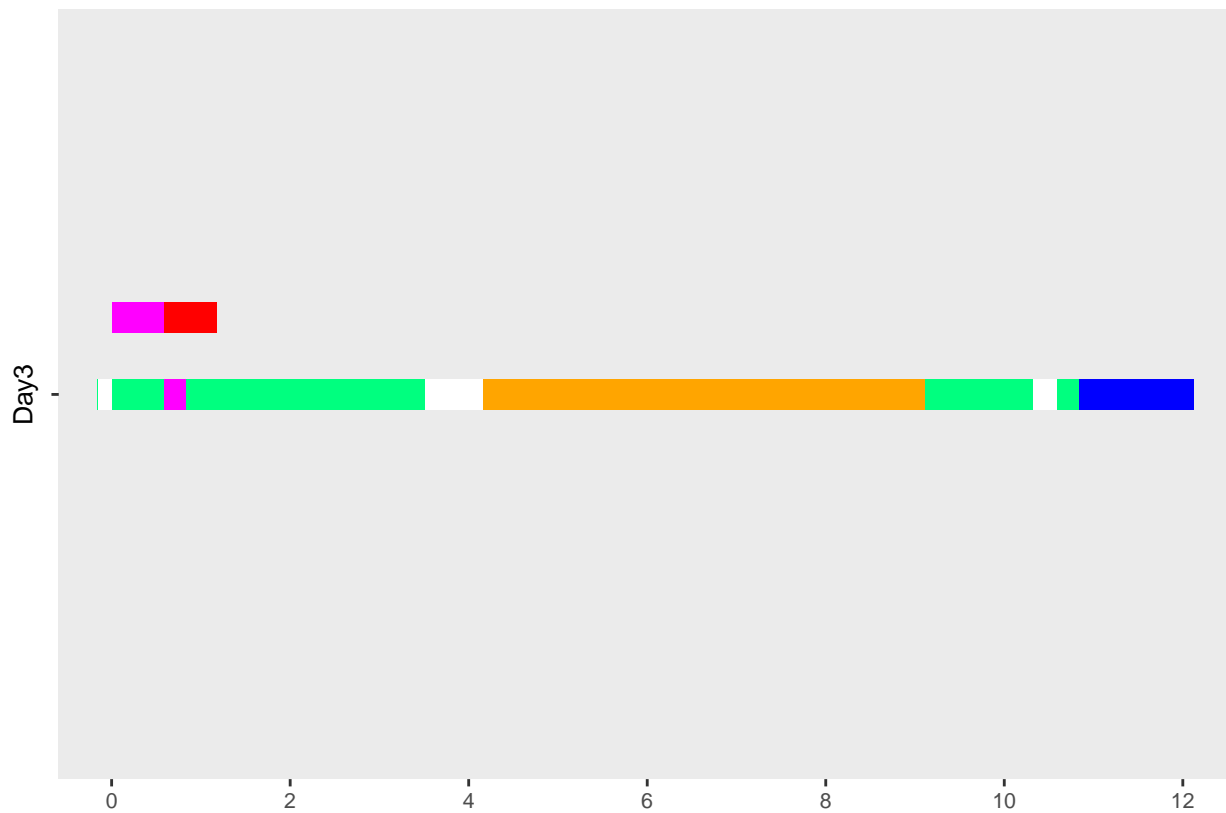
## Warning: Removed 11951 rows containing missing values (geom_point).

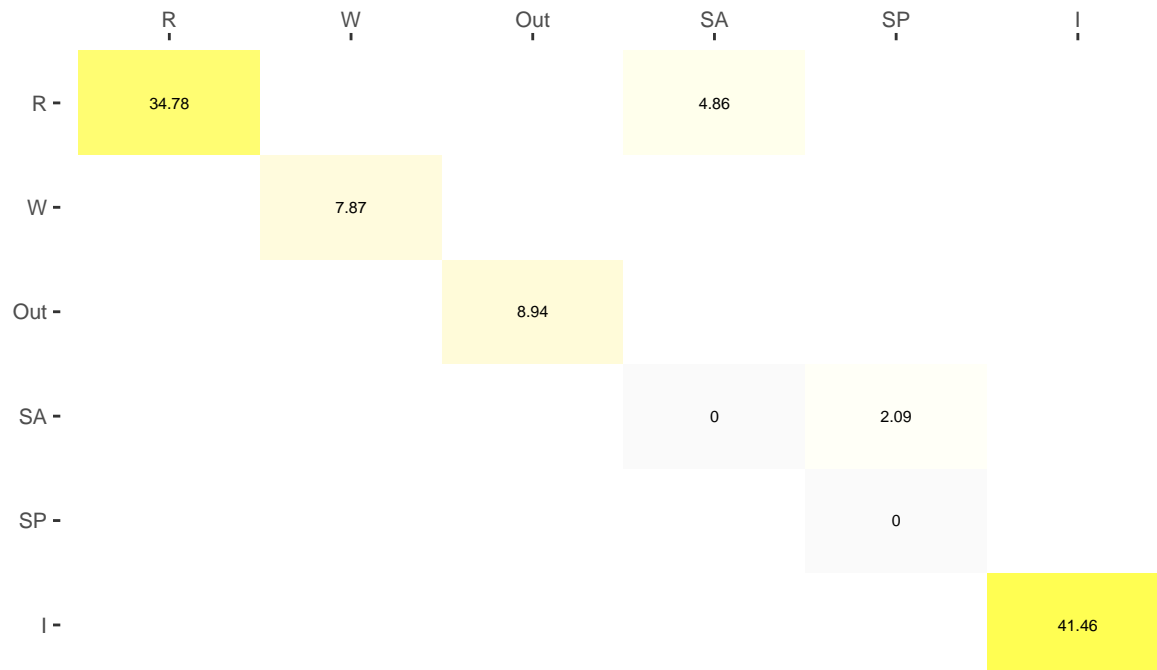
## [1] "after timeline"
## [1] "Before Heatmap calling"
## [1] "Entered"
## [1] "R"    "W"    "Out"  "SA"   "SP"   "I"

## Warning: Expected 2 pieces. Missing pieces filled with `NA` in 11120 rows [1, 2,
## 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, ...].

## [1] "I am before rest of Ontologies"

## Warning: Ignoring unknown parameters: face
```





```
## [1] "after calling"
## [1] "11111111111111111111"
##
## Out    R  R+I    W
## 760   465 1059 4754
```

```
## Warning: Removed 5979 rows containing missing values (geom_point).
```

```
## Warning: Removed 7038 rows containing missing values (geom_point).
```

```
## Warning: Removed 5979 rows containing missing values (geom_point).
```

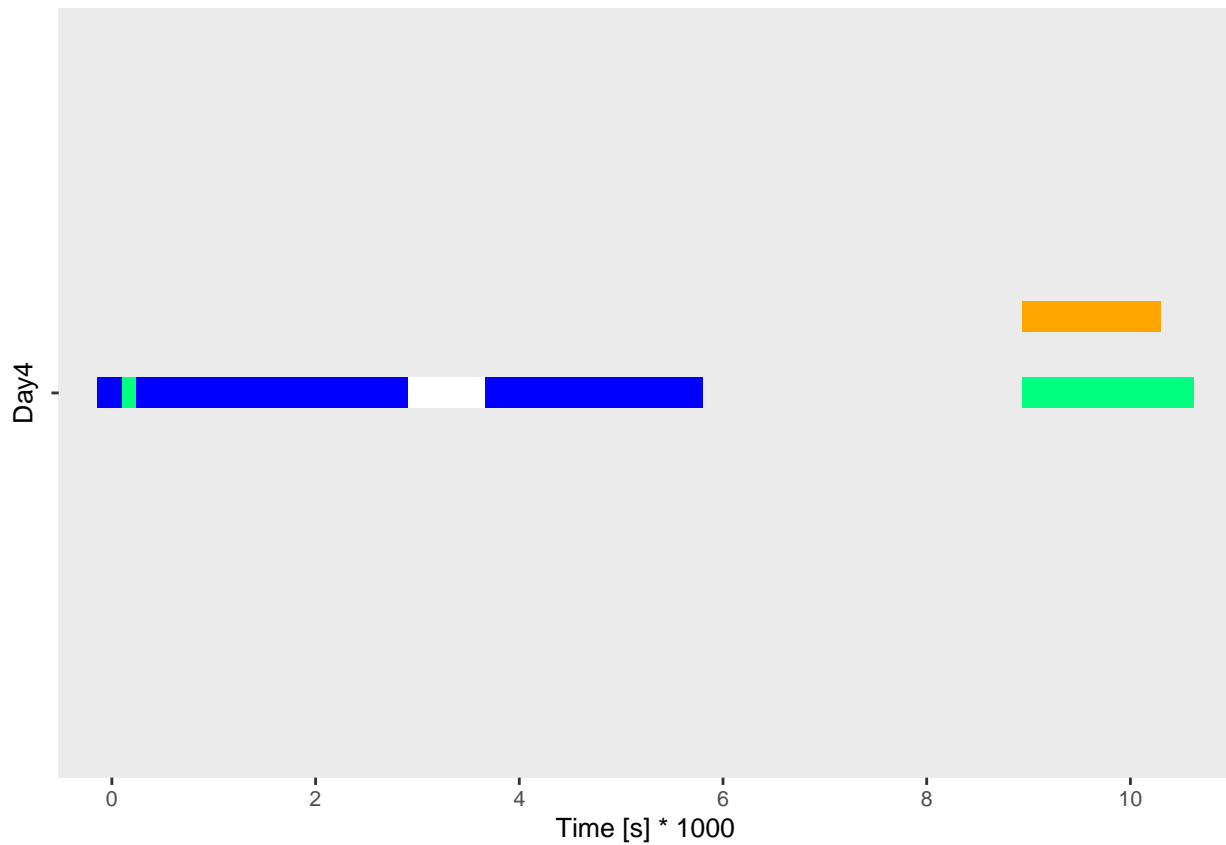
```
## Warning: Removed 7038 rows containing missing values (geom_point).
```

```
## [1] "after timeline"
## [1] "Before Heatmap calling"
## [1] "Entered"
## [1] "R"    "W"    "Out"  "SA"   "SP"   "I"
```

```
## Warning: Expected 2 pieces. Missing pieces filled with `NA` in 5979 rows [1, 2,
## 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, ...].
```

```
## [1] "I am before rest of Ontologies"
```

```
## Warning: Ignoring unknown parameters: face
```



```
## [1] "after calling"
```

```
## Warning: Removed 14101 rows containing missing values (geom_point).
```

```
## Warning: Removed 15456 rows containing missing values (geom_point).
```

```
## Warning: Removed 14273 rows containing missing values (geom_point).
```

```
## Warning: Removed 17231 rows containing missing values (geom_point).
```

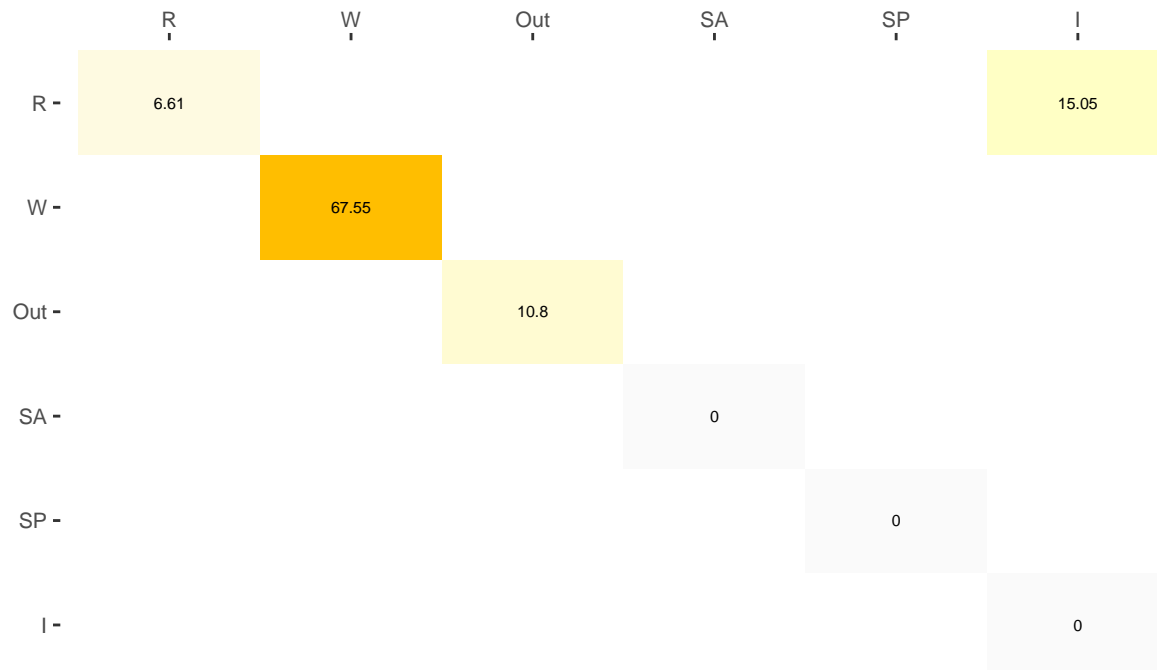
```
## Warning: Removed 11120 rows containing missing values (geom_point).
```

```
## Warning: Removed 11951 rows containing missing values (geom_point).
```

```
## Warning: Removed 5979 rows containing missing values (geom_point).
```

```
## Warning: Removed 7038 rows containing missing values (geom_point).
```





```
## [1] "11111111111111111111"
```

```
##
```

```
##      W
```

```
## 24504
```

```
## Warning: Removed 24504 rows containing missing values (geom_point).
```

```
## Warning: Removed 24504 rows containing missing values (geom_point).
```

```
## Warning: Removed 24504 rows containing missing values (geom_point).
```

```
## Warning: Removed 24504 rows containing missing values (geom_point).
```

```
## [1] "after timeline"
```

```
## [1] "Before Heatmap calling"
```

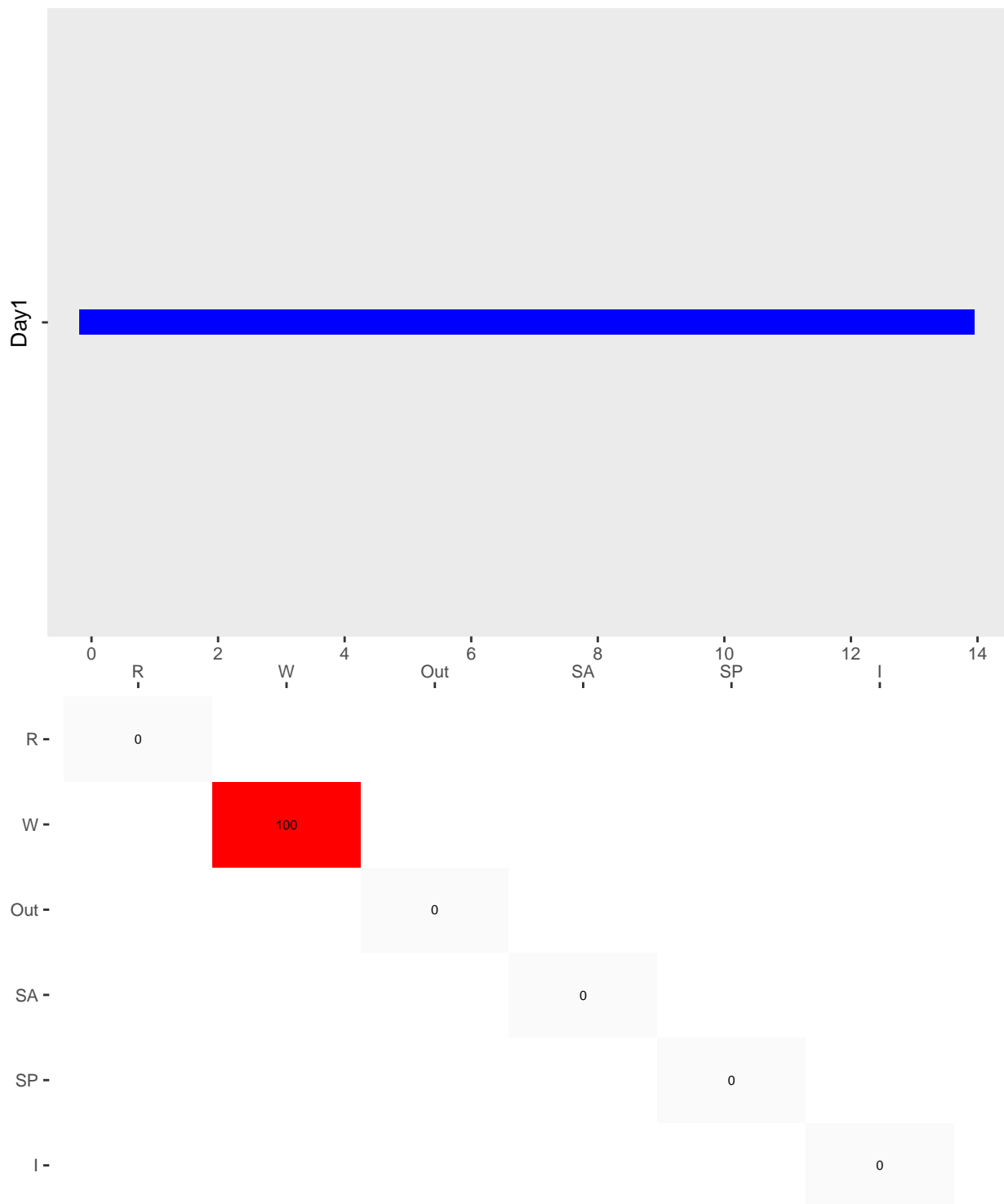
```
## [1] "Entered"
```

```
## [1] "R"    "W"    "Out"  "SA"   "SP"   "I"
```

```
## Warning: Expected 2 pieces. Missing pieces filled with `NA` in 24504 rows [1, 2,
## 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, ...].
```

```
## [1] "I am before rest of Ontologies"
```

```
## Warning: Ignoring unknown parameters: face
```



```
## [1] "after calling"
## [1] "11111111111111111111"
##
##      W
## 13434
```

```
## Warning: Removed 13434 rows containing missing values (geom_point).
```

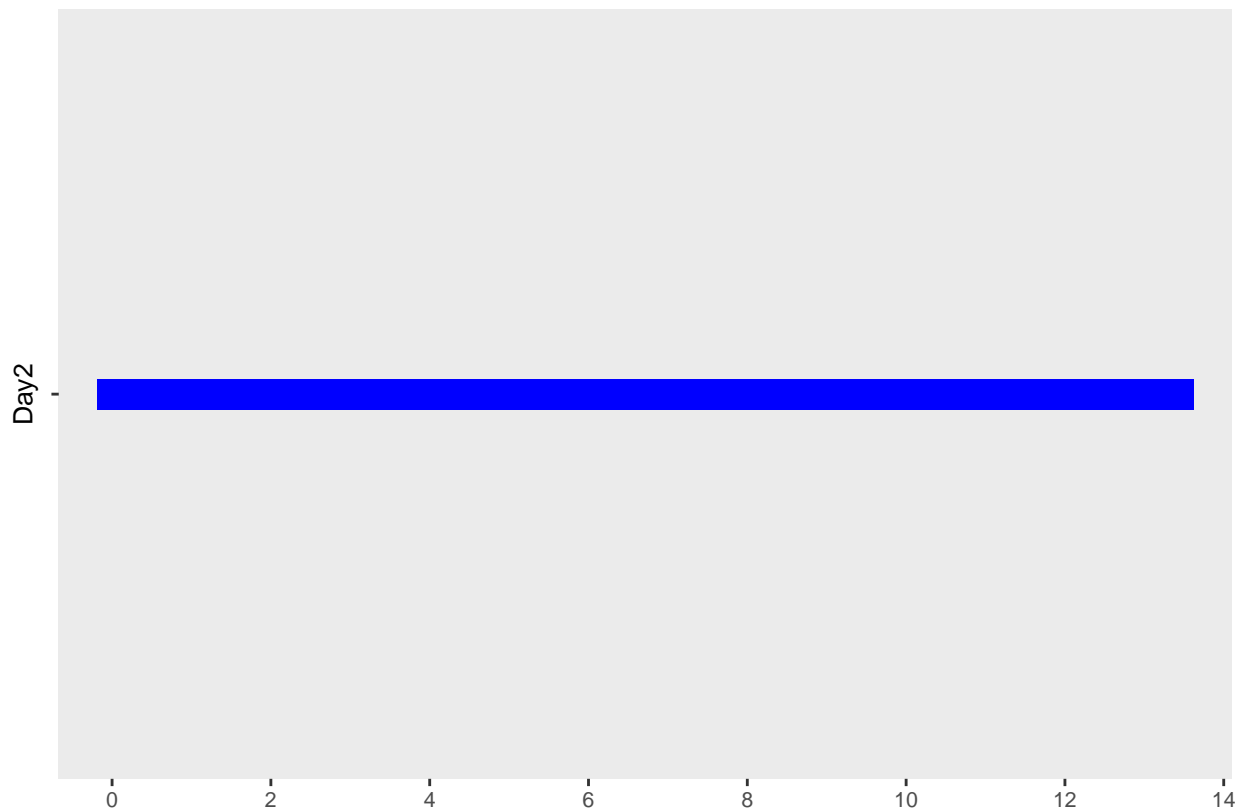
```
## Warning: Removed 13434 rows containing missing values (geom_point).
## Warning: Removed 13434 rows containing missing values (geom_point).
## Warning: Removed 13434 rows containing missing values (geom_point).

## [1] "after timeline"
## [1] "Before Heatmap calling"
## [1] "Entered"
## [1] "R"    "W"    "Out"  "SA"   "SP"   "I"

## Warning: Expected 2 pieces. Missing pieces filled with `NA` in 13434 rows [1, 2,
## 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, ...].

## [1] "I am before rest of Ontologies"

## Warning: Ignoring unknown parameters: face
```



	R	W	Out	SA	SP	I
R -	0					
W -		100				
Out -			0			
SA -				0		
SP -					0	
I -						0

```
## [1] "after calling"
## [1] "11111111111111111111"
##
## Out    SP    W
## 521    249 12814
```

```
## Warning: Removed 13584 rows containing missing values (geom_point).
```

```
## Warning: Removed 13584 rows containing missing values (geom_point).
```

```
## Warning: Removed 13584 rows containing missing values (geom_point).
```

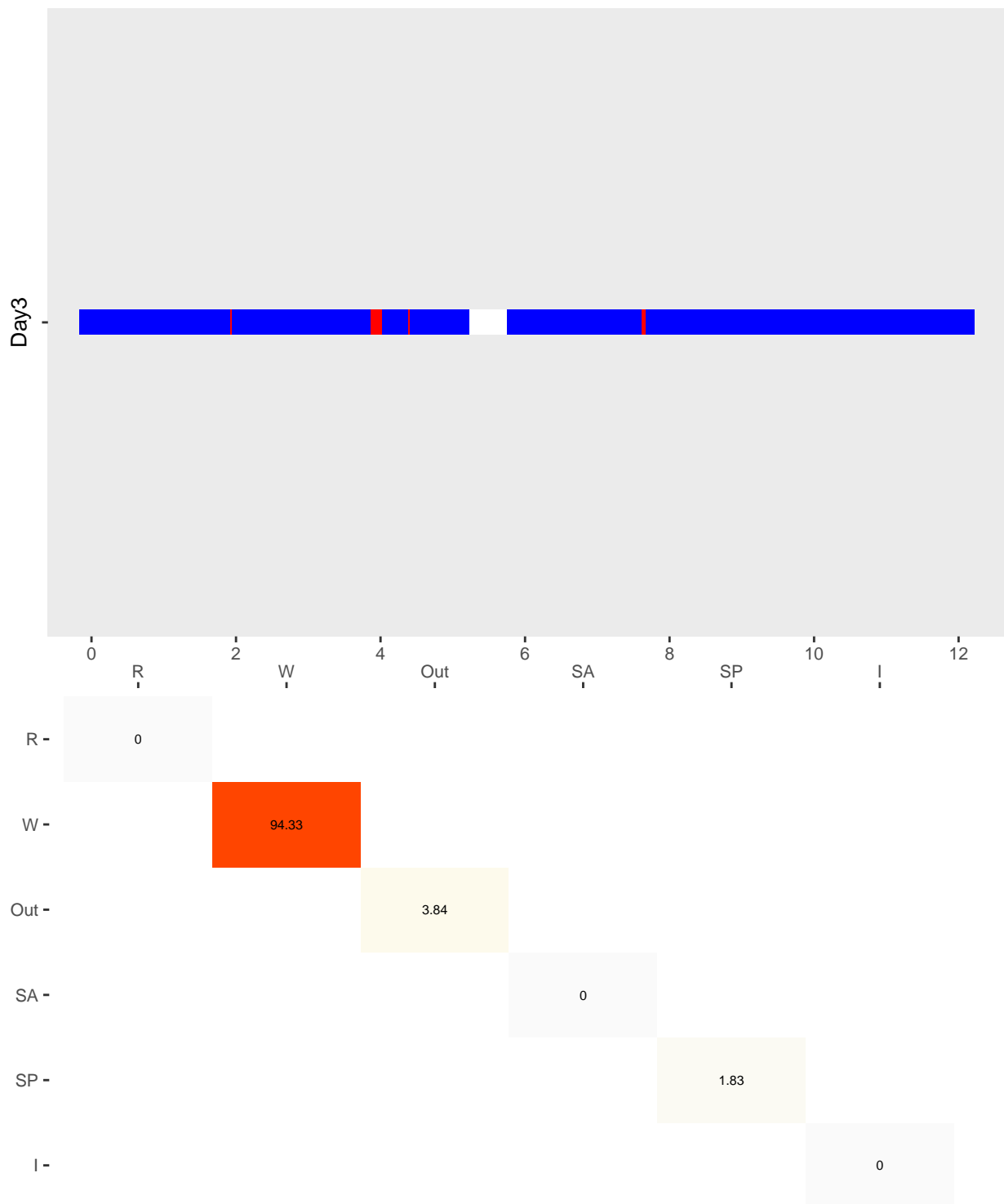
```
## Warning: Removed 13584 rows containing missing values (geom_point).
```

```
## [1] "after timeline"
## [1] "Before Heatmap calling"
## [1] "Entered"
## [1] "R"    "W"    "Out"  "SA"   "SP"   "I"
```

```
## Warning: Expected 2 pieces. Missing pieces filled with `NA` in 13584 rows [1, 2,
## 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, ...].
```

```
## [1] "I am before rest of Ontologies"
```

```
## Warning: Ignoring unknown parameters: face
```



```
## [1] "after calling"
## [1] "111111111111111111"
##
## Out SP W
## 8760 453 4084
```

```
## Warning: Removed 13297 rows containing missing values (geom_point).
```

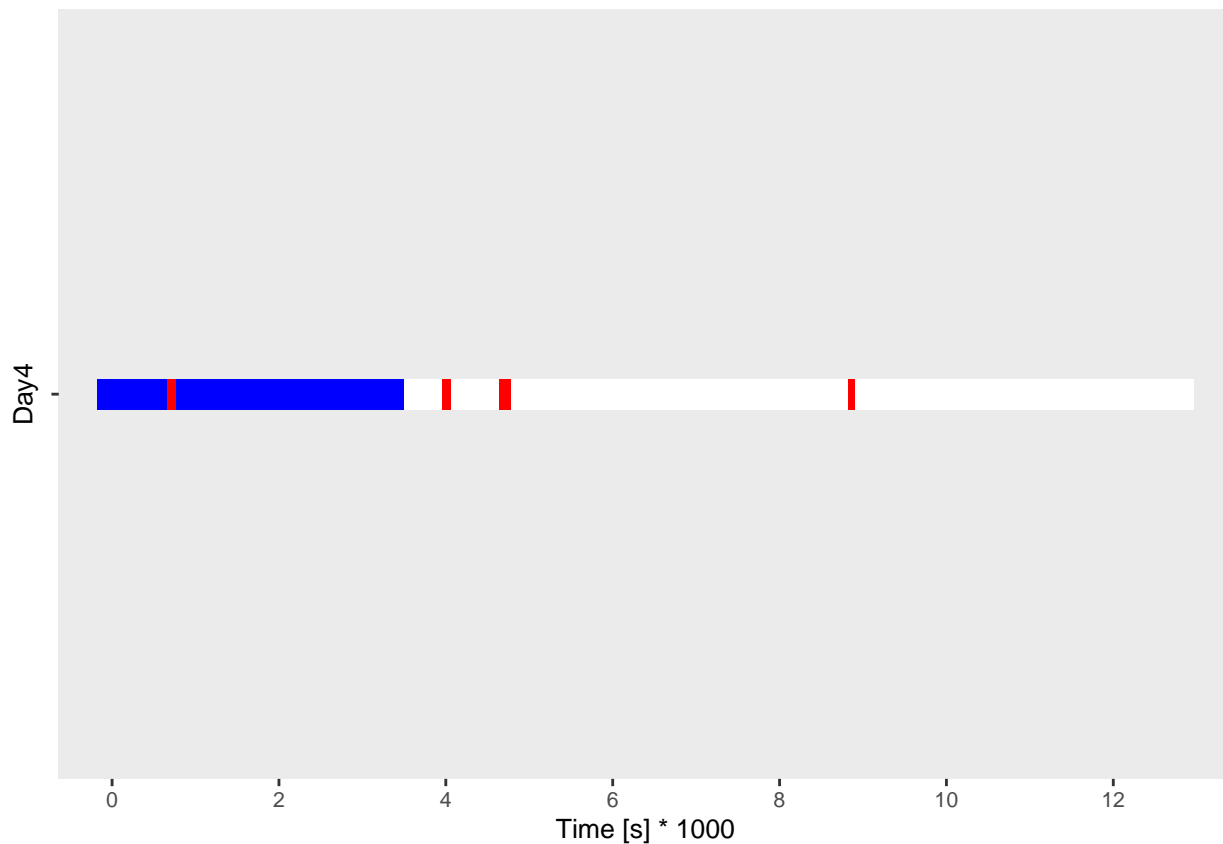
```
## Warning: Removed 13297 rows containing missing values (geom_point).
## Warning: Removed 13297 rows containing missing values (geom_point).
## Warning: Removed 13297 rows containing missing values (geom_point).

## [1] "after timeline"
## [1] "Before Heatmap calling"
## [1] "Entered"
## [1] "R"    "W"    "Out"  "SA"   "SP"   "I"

## Warning: Expected 2 pieces. Missing pieces filled with `NA` in 13297 rows [1, 2,
## 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, ...].

## [1] "I am before rest of Ontologies"

## Warning: Ignoring unknown parameters: face
```



```
## [1] "after calling"

## Warning: Removed 24504 rows containing missing values (geom_point).

## Warning: Removed 24504 rows containing missing values (geom_point).
```

```
## Warning: Removed 13434 rows containing missing values (geom_point).
## Warning: Removed 13434 rows containing missing values (geom_point).
## Warning: Removed 13584 rows containing missing values (geom_point).
## Warning: Removed 13584 rows containing missing values (geom_point).
## Warning: Removed 13297 rows containing missing values (geom_point).
## Warning: Removed 13297 rows containing missing values (geom_point).
```

	R	W	Out	SA	SP	I
R -	0					
W -		30.71				
Out -			65.88			
SA -				0		
SP -					3.41	
I -						0