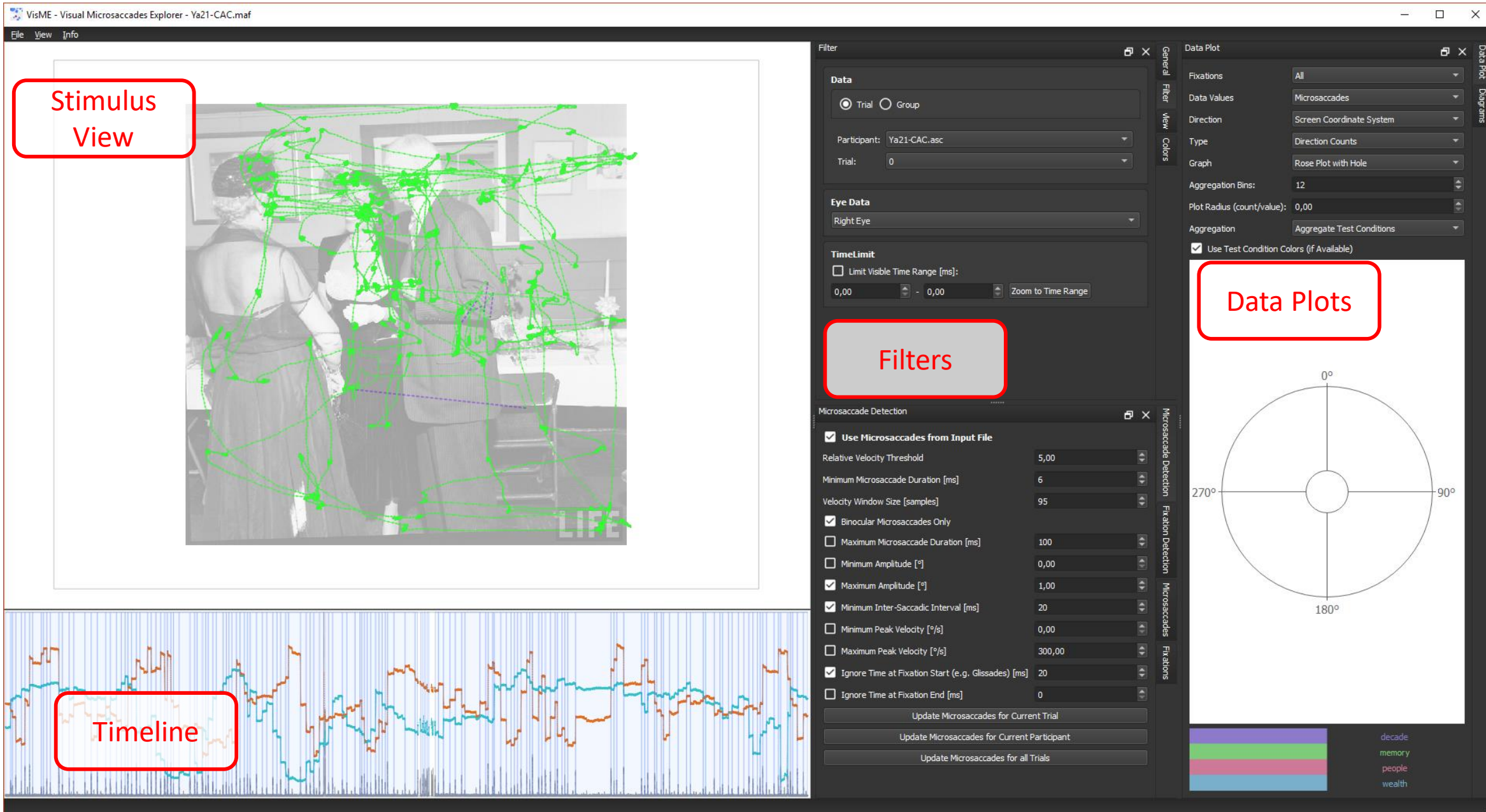
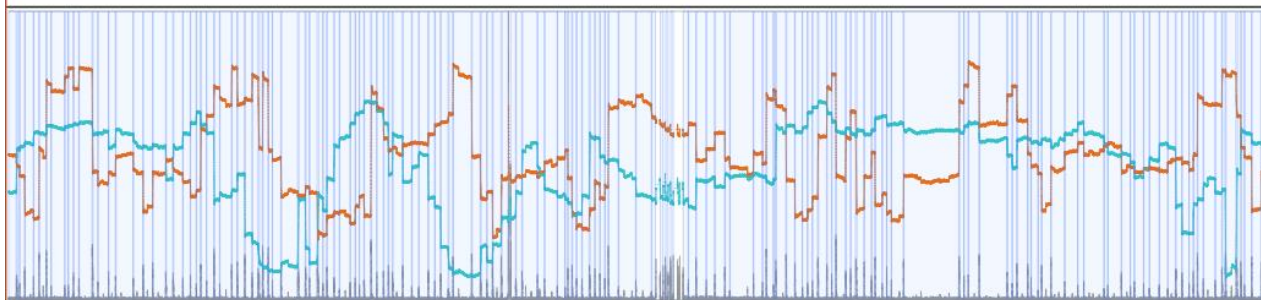
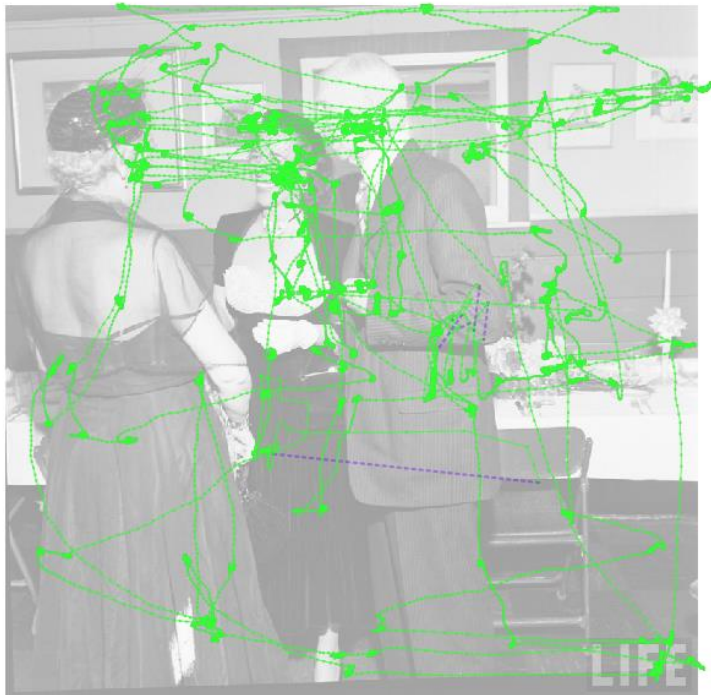


# Visual Microsaccades Explorer

Demonstration



# Single Trial Exploration



Filter

Data

☒ Trial ☐ Group

Participant: Ya21-CAC.asc

Trial: Ya21-JMW.asc

Ya21-JNV.asc

Ya21-MKK.asc

Ya22-AMS.asc

Ya22-CPE.asc

Ya22-DGO.asc

Ya22+HRW.asc

Ya23-EXE.asc

Ya23-JWL.asc

Ya23-SFJ.asc

Ya23-TLW.asc

Ya24-CBG.asc

Ya24-JLK.asc

Ya24-LMK.asc

Ya24-MKW.asc

Microsaccade

☒ Use Microsaccades from Input File

Relative Velocity Threshold 5,00

Minimum Microsaccade Duration [ms] 6

Velocity Window Size [samples] 95

☒ Binocular Microsaccades Only☐ Maximum Microsaccade Duration [ms] 100☐ Minimum Amplitude [°] 0,00☒ Maximum Amplitude [°] 1,00☒ Minimum Inter-Saccadic Interval [ms] 20☐ Minimum Peak Velocity [°/s] 0,00☐ Maximum Peak Velocity [°/s] 300,00☒ Ignore Time at Fixation Start (e.g. Glissades) [ms] 20☐ Ignore Time at Fixation End [ms] 0

Update Microsaccades for Current Trial

Update Microsaccades for Current Participant

Update Microsaccades for all Trials

Select  
participant

Data Plot

Fixations All

Data Values Microsaccades

Direction Screen Coordinate System

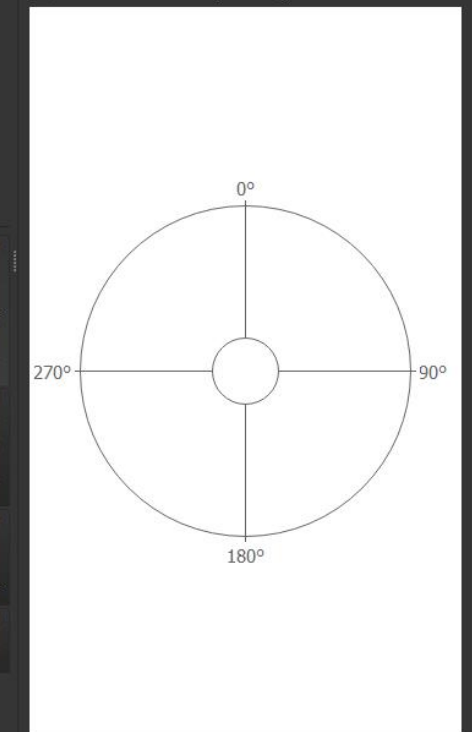
Type Direction Counts

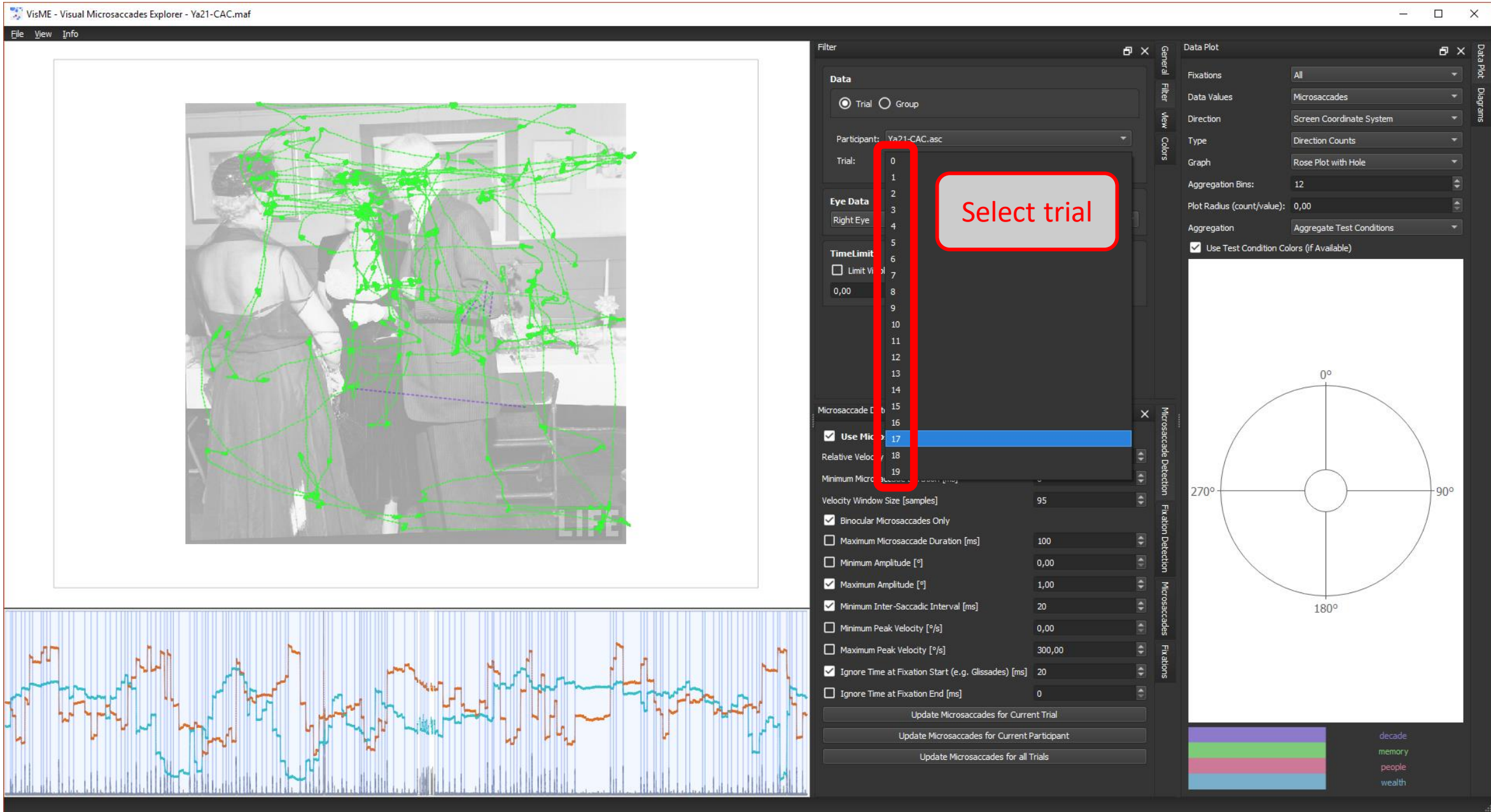
Graph Rose Plot with Hole

Aggregation Bins: 12

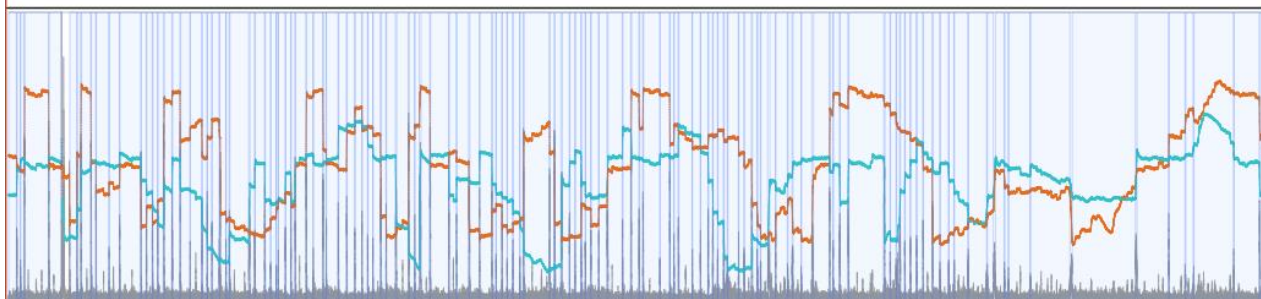
Plot Radius (count/value): 0,00

Aggregation Aggregate Test Conditions

☒ Use Test Condition Colors (if Available)decade  
memory  
people  
wealth



Trial 17  
visible



## Filter

## Data

☒ Trial ☐ Group

Participant: Ya21-CAC.asc

Trial: 17

## Eye Data

Right Eye

## TimeLimit

☐ Limit Visible Time Range [ms]:

0,00 - 0,00 Zoom to Time Range

## Microsaccade Detection

☒ Use Microsaccades from Input File

Relative Velocity Threshold 5,00

Minimum Microsaccade Duration [ms] 6

Velocity Window Size [samples] 95

☒ Binocular Microsaccades Only

☐ Maximum Microsaccade Duration [ms] 100

☐ Minimum Amplitude [°] 0,00

☒ Maximum Amplitude [°] 1,00

☒ Minimum Inter-Saccadic Interval [ms] 20

☐ Minimum Peak Velocity [°/s] 0,00

☐ Maximum Peak Velocity [°/s] 300,00

☒ Ignore Time at Fixation Start (e.g. Glassades) [ms] 20

☐ Ignore Time at Fixation End [ms] 0

Update Microsaccades for Current Trial

Update Microsaccades for Current Participant

Update Microsaccades for all Trials

## Data Plot

Fixations All

Data Values Microsaccades

Direction Screen Coordinate System

Type Direction Counts

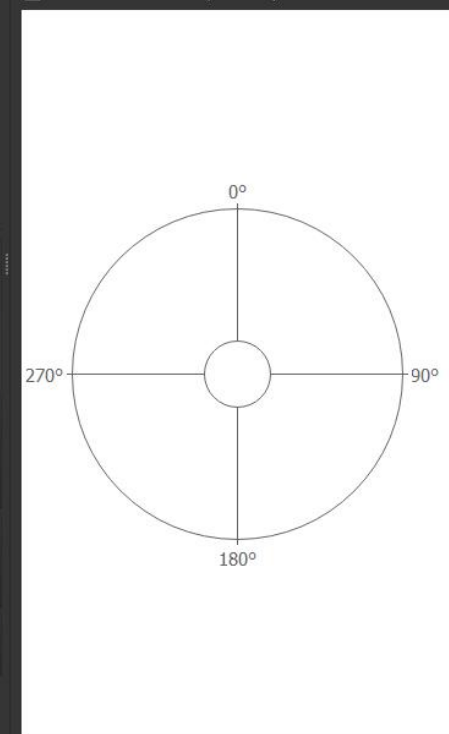
Graph Rose Plot with Hole

Aggregation Bins: 12

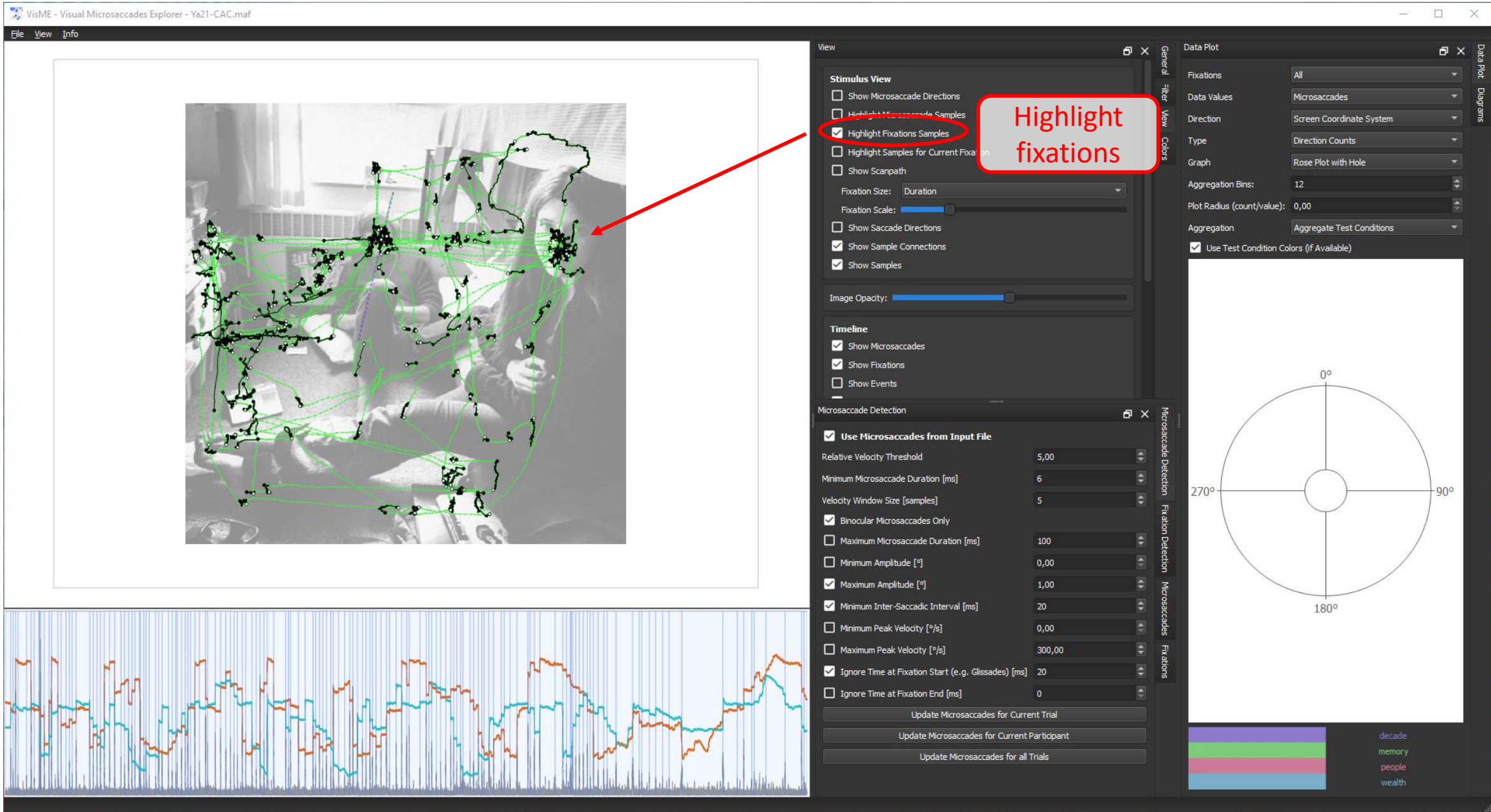
Plot Radius (count/value): 0,00

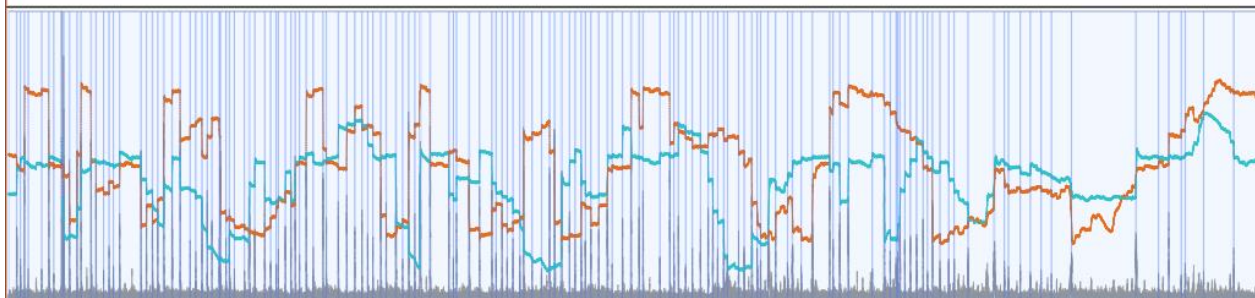
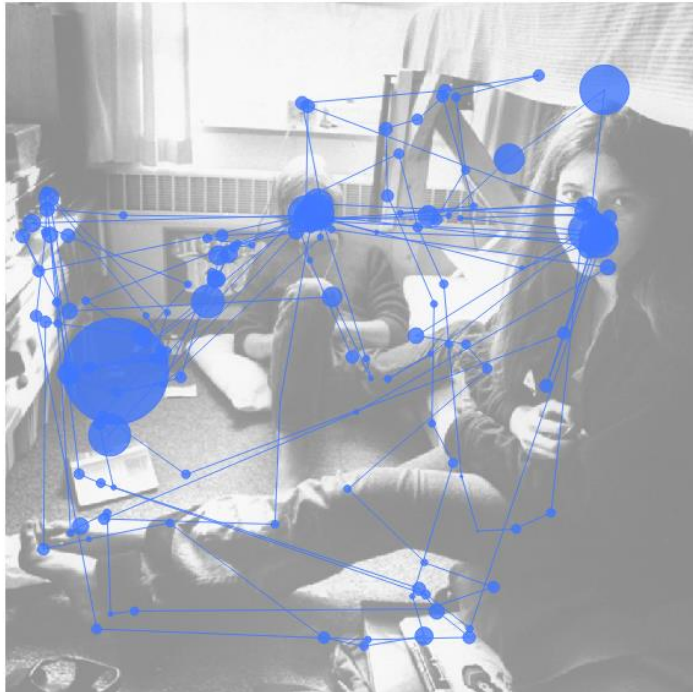
Aggregation Aggregate Test Conditions

☒ Use Test Condition Colors (if Available)



decade  
memory  
people  
wealth





## View

## Stimulus View

- ☐ Show Microsaccade Directions
- ☐ Highlight Microsaccade Samples
- ☐ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☒ Show Scanpath

Fixation Size: Duration

Fixation Scale: 

- ☐ Show Saccade Directions
- ☐ Show Sample Connections
- ☐ Show Samples

Image Opacity: 

## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

## Microsaccade Detection

- ☒ Use Microsaccades from Input File

Relative Velocity Threshold Minimum Microsaccade Duration [ms] Velocity Window Size [samples] 

- ☒ Binocular Microsaccades Only

☐ Maximum Microsaccade Duration [ms] ☐ Minimum Amplitude [°] ☒ Maximum Amplitude [°] ☒ Minimum Inter-Saccadic Interval [ms] ☐ Minimum Peak Velocity [°/s] ☐ Maximum Peak Velocity [°/s] ☒ Ignore Time at Fixation Start (e.g. Glimsades) [ms] ☐ Ignore Time at Fixation End [ms] 

Update Microsaccades for Current Trial

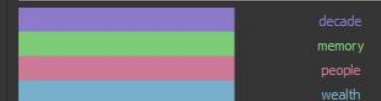
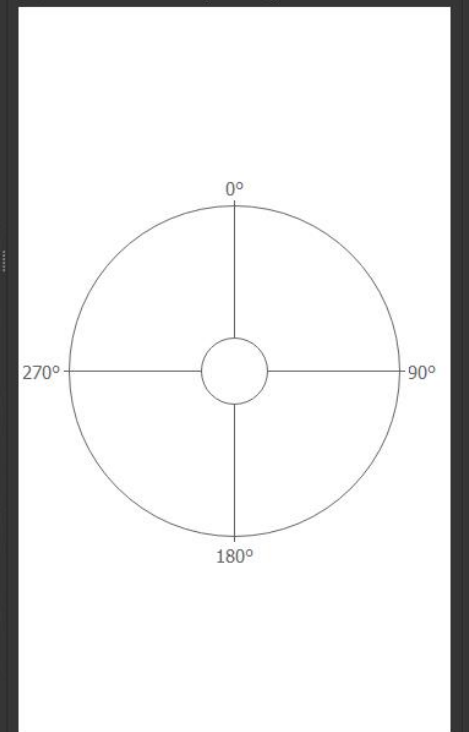
Update Microsaccades for Current Participant

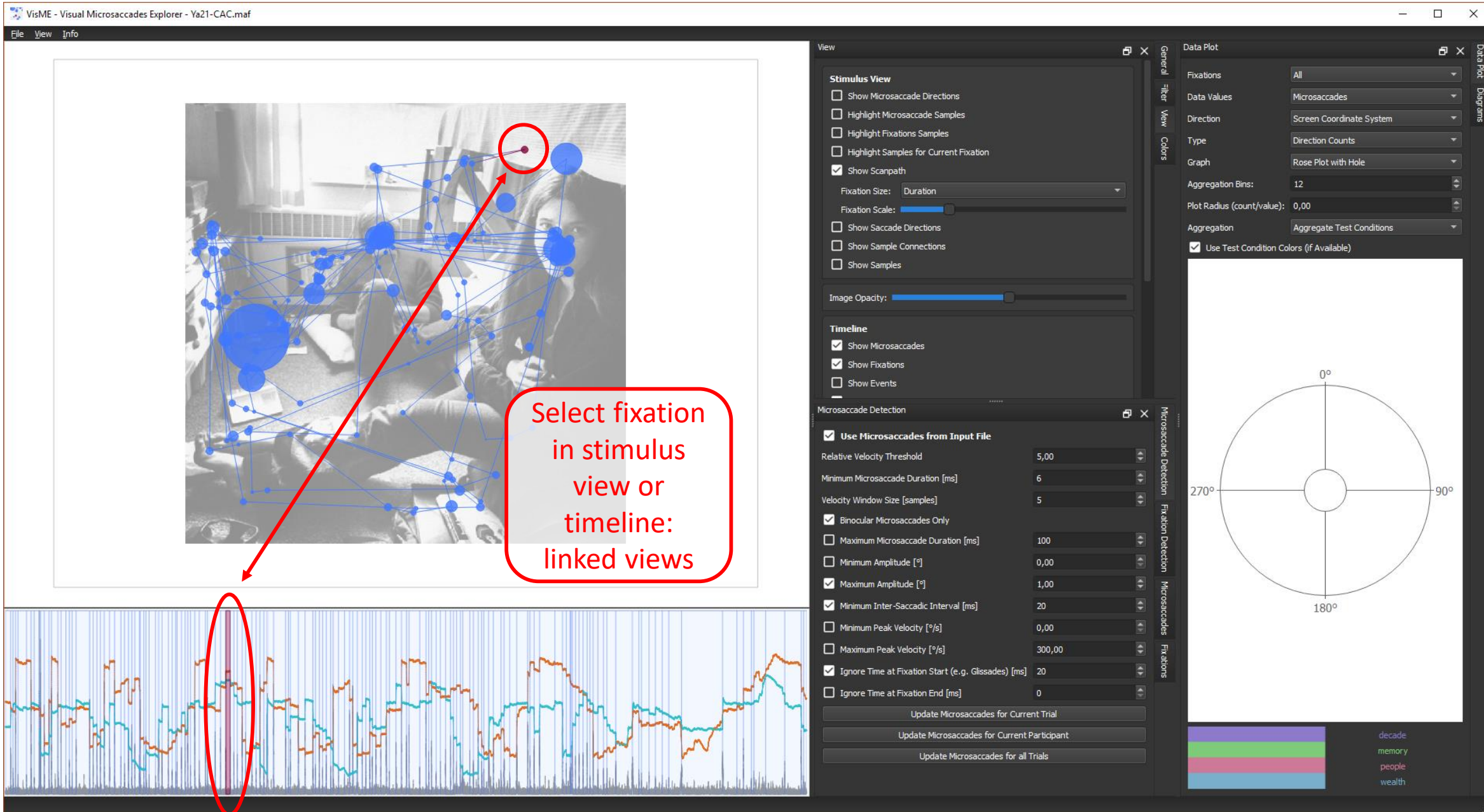
Update Microsaccades for all Trials

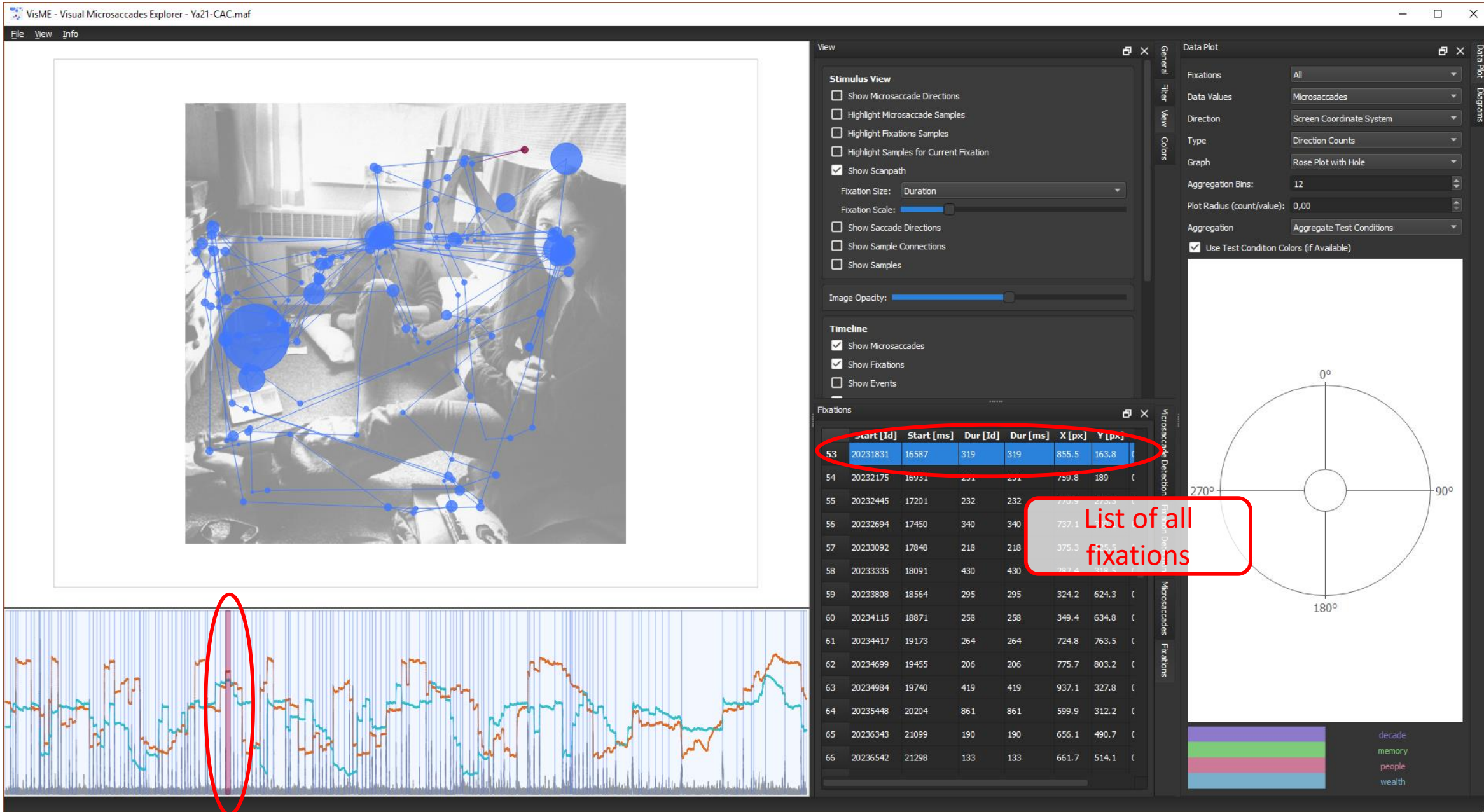
Show  
scanpath

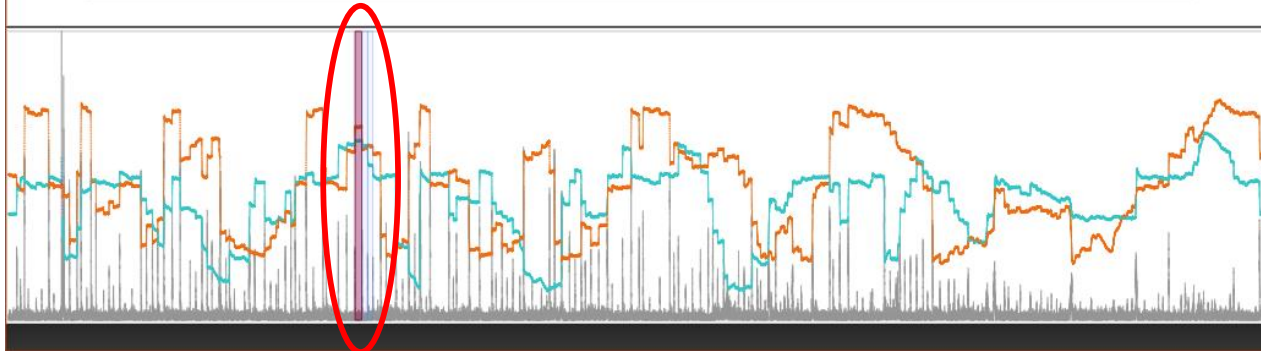
## Data Plot

- Fixations: All
- Data Values: Microsaccades
- Direction: Screen Coordinate System
- Type: Direction Counts
- Graph: Rose Plot with Hole
- Aggregation Bins: 12
- Plot Radius (count/value): 0,00
- Aggregation: Aggregate Test Conditions
- ☒ Use Test Condition Colors (if Available)









View

☐ Show Sample Connections  
☐ Show Samples

Image Opacity:

Timeline

☒ Show Microsaccades  
☒ Show Fixations  
☐ Show Events  
☒ Show x Values  
☒ Show y Values  
☒ Show Velocity

Visible Fixation Area

☒ Show Neighboring Fixations Only

Previous Fixations:   
Following Fixations:   
☐ Zoom to Visible Fixation Area

Fixations

	Start [Id]	Start [ms]	Dur [Id]	Dur [ms]	X [px]	Y [px]
53	20 1831	16587	319	319	855.1	163.8
54	20 32175	16587	251	251	765.8	189.8
55	20 32445	17201	232	232	770.9	273.3
56	20 32691	17201	232	232	770.9	273.3
57	20 33092	17808	218	218	775.3	325.5
58	20 33335	18091	430	430	287.4	318.5
59	20 33508	18091	430	430	287.4	318.5
60	20 234115	18871	258	258	349.4	634.8
61	20 234417	19173	264	264	724.8	763.5
62	20 234699	19455	206	206	775.7	803.2
63	20 234984	19740	419	419	937.1	327.8
64	20 235448	20204	861	861	599.9	312.2
65	20 236343	21099	190	190	656.1	490.7
66	20 236542	21298	133	133	661.7	514.1

Show selected fixation and its neighborhood

Data Plot

General Filter View Colors

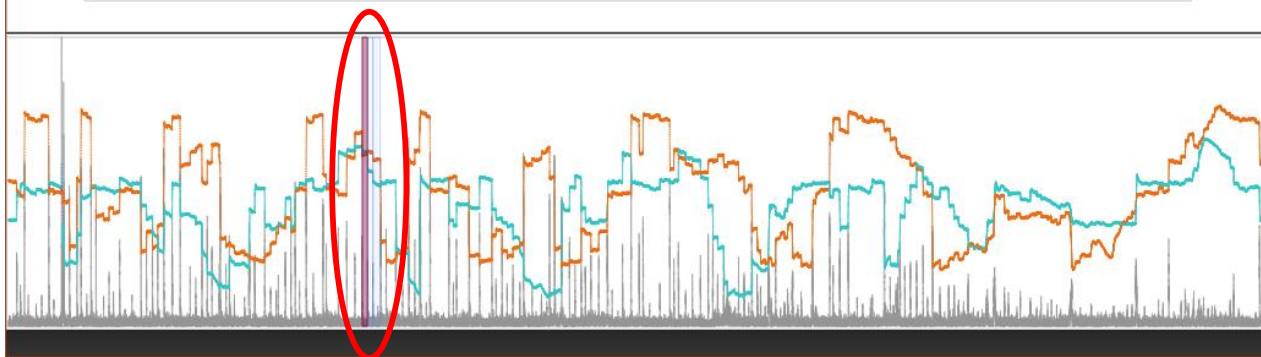
Fixations: All  
Data Values: Microsaccades  
Direction: Screen Coordinate System  
Type: Direction Counts  
Graph: Rose Plot with Hole  
Aggregation Bins: 12  
Plot Radius (count/value): 0,00  
Aggregation: Aggregate Test Conditions  
☒ Use Test Condition Colors (if Available)

Microsaccade Detection Fixation Detection Microsaccades Fixations

0°  
90°  
180°  
270°

decade  
memory  
people  
wealth

Walk through  
the scanpath  
on fixation  
level



## View

- ☐ Show Sample Connections
- ☐ Show Samples

Image Opacity: 

## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events
- ☒ Show x Values
- ☒ Show y Values
- ☒ Show Velocity

## Visible Fixation Area

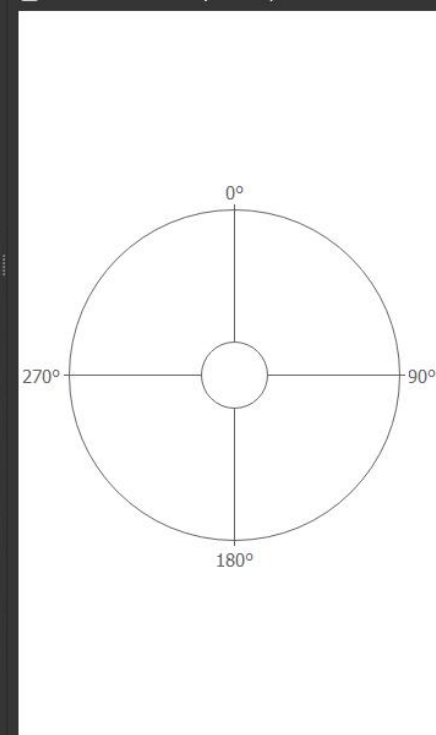
- ☒ Show Neighboring Fixations Only
- Previous Fixations:
- Following Fixations:
- ☐ Zoom to Visible Fixation Area

## Fixations

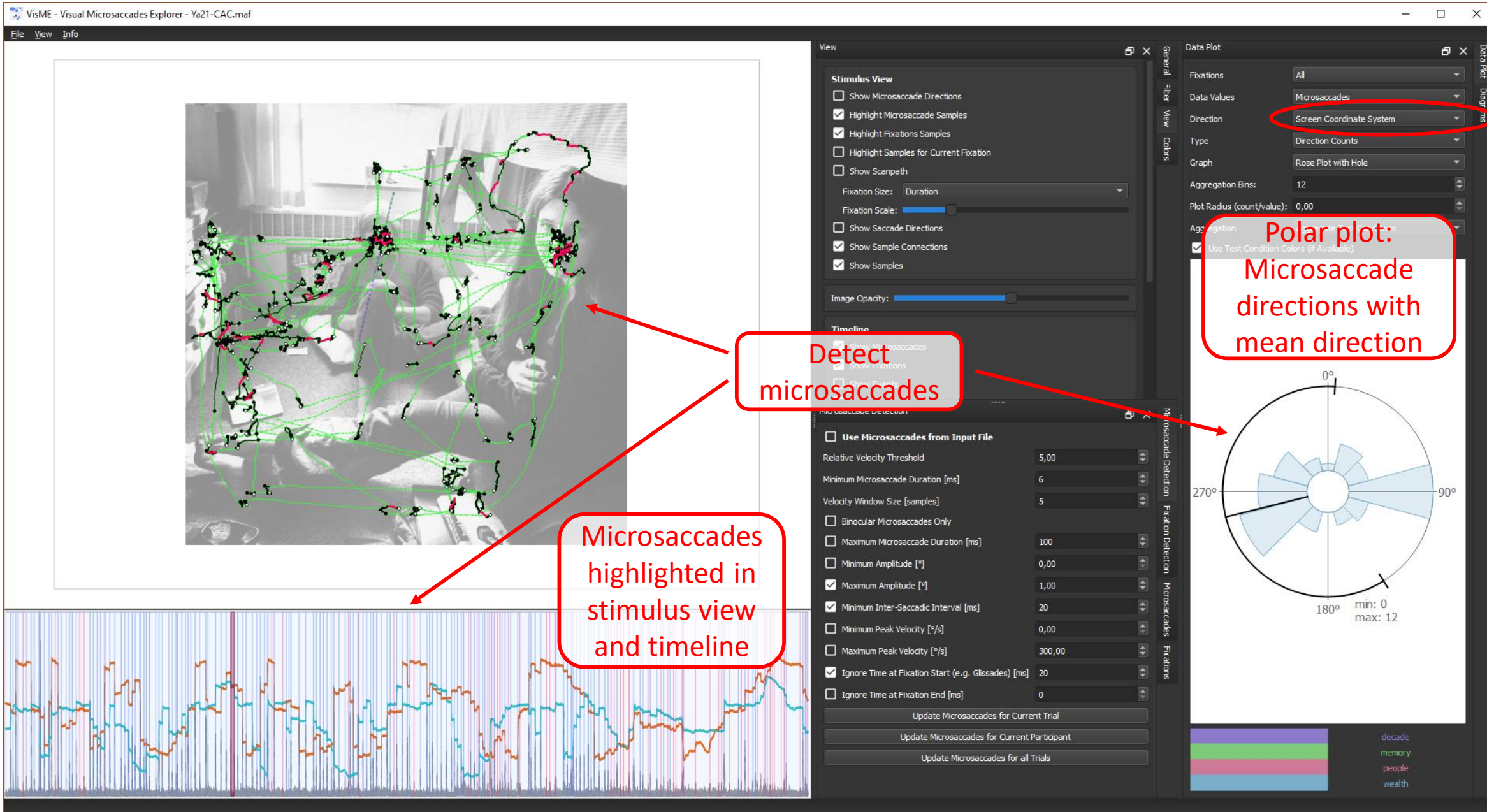
	Start [Id]	Start [ms]	Dur [Id]	Dur [ms]	X [px]	Y [px]	
53	20231831	15567	319	319	300.5	163.8	(
54	20232175	16931	251	251	759.8	189	(
55	20232445	17221	233	233	770.3	273.3	(
56	20232694	17450	340	340	737.1	330.1	(
57	20233092	17848	218	218	375.3	325.5	(
58	20233335	18091	430	430	287.4	318.5	(
59	20233808	18564	295	295	324.2	624.3	(
60	20234115	18871	258	258	349.4	634.8	(
61	20234417	19173	264	264	724.8	763.5	(
62	20234699	19455	206	206	775.7	803.2	(
63	20234984	19740	419	419	937.1	327.8	(
64	20235448	20204	861	861	599.9	312.2	(
65	20236343	21099	190	190	656.1	490.7	(
66	20236542	21298	133	133	661.7	514.1	(

## Data Plot

- Fixations: All
- Data Values: Microsaccades
- Direction: Screen Coordinate System
- Type: Direction Counts
- Graph: Rose Plot with Hole
- Aggregation Bins: 12
- Plot Radius (count/value): 0,00
- Aggregation: Aggregate Test Conditions
- ☒ Use Test Condition Colors (if Available)

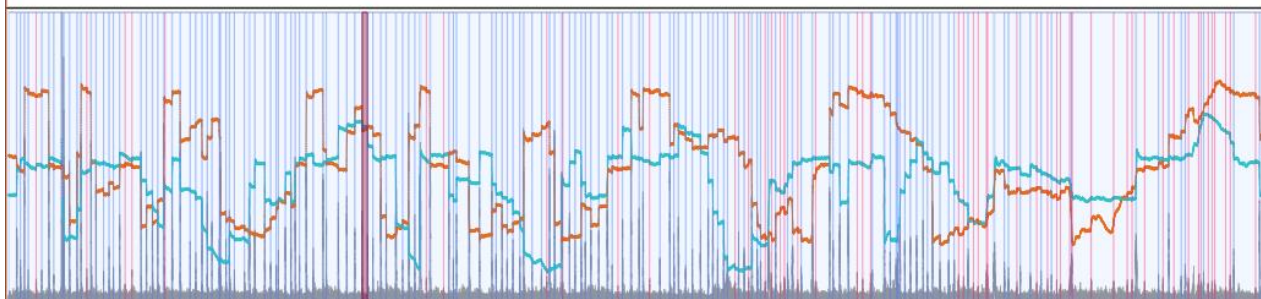


decade  
memory  
people  
wealth





Microsaccade  
distribution:  
position and  
direction



View

**Stimulus View**

- ☒ Show Microsaccade Directions
- ☐ Highlight Microsaccade Samples
- ☐ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☐ Show Scanpath

Fixation Size: Duration

Fixation Scale: 

- ☐ Show Saccade Directions
- ☐ Show Sample Connections
- ☐ Show Samples

Image Opacity: **Timeline**

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

**Microsaccade Detection**

- ☐ Use Microsaccades from Input File

Relative Velocity Threshold 5,00

Minimum Microsaccade Duration [ms] 6

Velocity Window Size [samples] 5

☐ Binocular Microsaccades Only☐ Maximum Microsaccade Duration [ms] 100☐ Minimum Amplitude [°] 0,00☒ Maximum Amplitude [°] 1,00☒ Minimum Inter-Saccadic Interval [ms] 20☐ Minimum Peak Velocity [°/s] 0,00☐ Maximum Peak Velocity [°/s] 300,00☒ Ignore Time at Fixation Start (e.g. Glissades) [ms] 20☐ Ignore Time at Fixation End [ms] 0

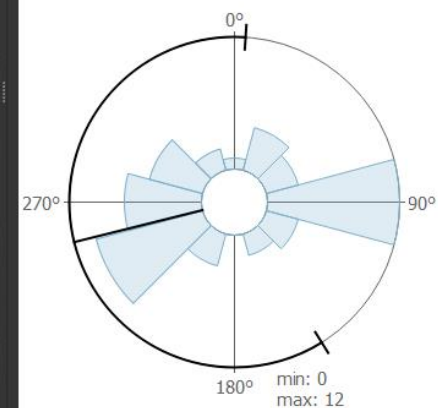
Update Microsaccades for Current Trial

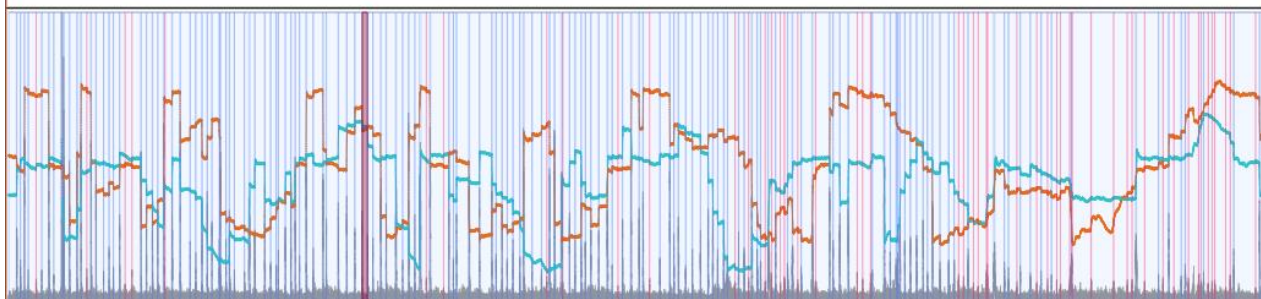
Update Microsaccades for Current Participant

Update Microsaccades for all Trials

Data Plot

- Fixations All
- Data Values Microsaccades
- Direction Screen Coordinate System
- Type Direction Counts
- Graph Rose Plot with Hole
- Aggregation Bins 12
- Plot Radius (count/value) 0,00
- Aggregation Aggregate Test Conditions
- ☒ Use Test Condition Colors (if Available)

min: 0  
max: 12decade  
memory  
people  
wealth



## View

## Stimulus View

- ☒ Show Microsaccade Directions
- ☐ Highlight Microsaccade Samples
- ☐ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☐ Show Scanpath

Fixation Size: Fixation Scale: 

- ☐ Show Saccade Directions
- ☐ Show Sample Connections
- ☐ Show Samples

Image Opacity: 

## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

## Microsaccade Detection

- ☐ Use Microsaccades from Input File

Relative Velocity Threshold Minimum Microsaccade Duration [ms] Velocity Window Size [samples] 

- ☐ Binocular Microsaccades Only

☐ Maximum Microsaccade Duration [ms] ☐ Minimum Amplitude [°] ☒ Maximum Amplitude [°] ☒ Minimum Inter-Saccadic Interval [ms] ☐ Minimum Peak Velocity [°/s] ☐ Maximum Peak Velocity [°/s] ☒ Ignore Time at Fixation Start (e.g. Glasses) [ms] ☐ Ignore Time at Fixation End [ms] 

Update Microsaccades for Current Trial

Update Microsaccades for Current Participant

Update Microsaccades for all Trials

## General

## Filter

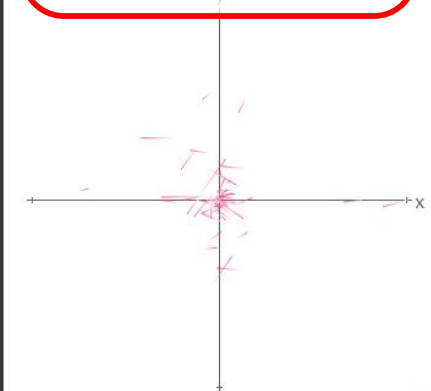
## View

## Colors

## Data Plot

Fixations Data Values Direction Type Marker value (°): Aggregation 

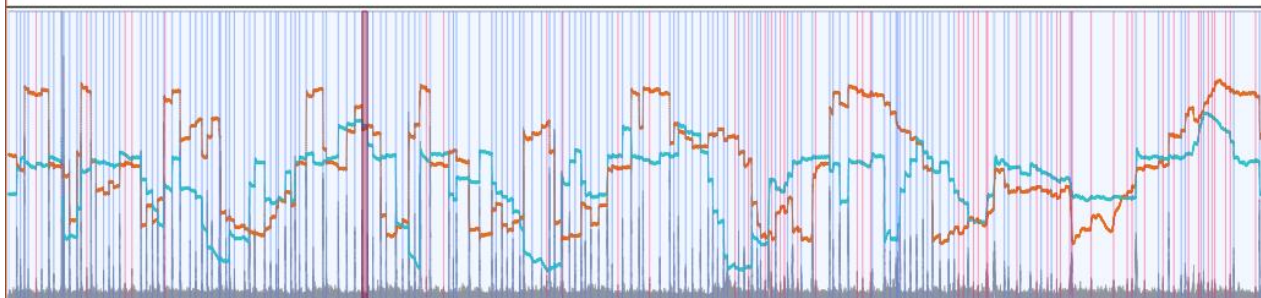
Microsaccade  
distribution  
related to  
fixation centers



marker: 4.05641°



decade  
memory  
people  
wealth



## View

## Stimulus View

- ☒ Show Microsaccade Directions
- ☐ Highlight Microsaccade Samples
- ☐ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☐ Show Scanpath

Fixation Size: Duration

Fixation Scale: 

- ☐ Show Saccade Directions
- ☐ Show Sample Connections
- ☐ Show Samples

Image Opacity: 

## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

## Microsaccade Detection

- ☐ Use Microsaccades from Input File

Relative Velocity Threshold 5,00

Minimum Microsaccade Duration [ms] 6

Velocity Window Size [samples] 5

☐ Binocular Microsaccades Only☐ Maximum Microsaccade Duration [ms] 100☐ Minimum Amplitude [°] 0,00☒ Maximum Amplitude [°] 1,00☒ Minimum Inter-Saccadic Interval [ms] 20☐ Minimum Peak Velocity [°/s] 0,00☐ Maximum Peak Velocity [°/s] 300,00☒ Ignore Time at Fixation Start (e.g. Glissades) [ms] 20☐ Ignore Time at Fixation End [ms] 0

Update Microsaccades for Current Trial

Update Microsaccades for Current Participant

Update Microsaccades for all Trials

## General

## Filter

## View

## Colors

## Data Plot

Fixations All

Data Values Gaze Movement (Samples of Fixations)

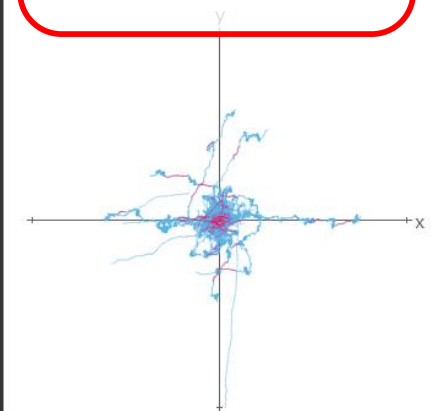
Direction Screen Coordinate System

Type Movement in Relation to Fixation Center

Marker value (°): 0,00

Aggregation Aggregate Fixations

Fixations with  
highlighted  
microsaccades

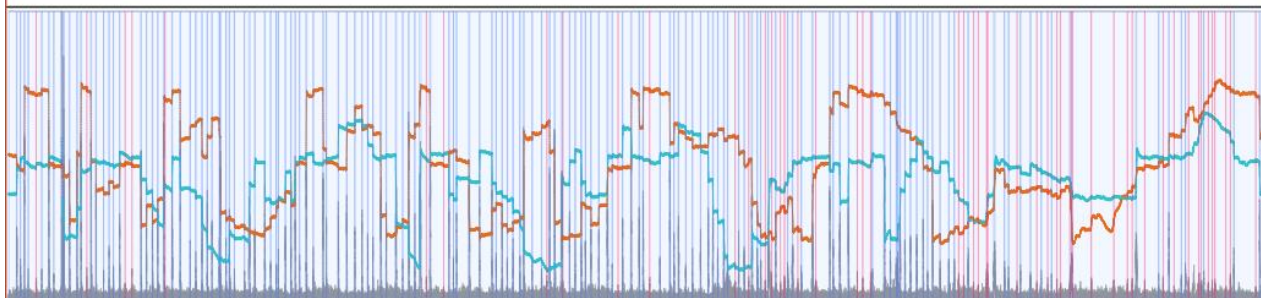
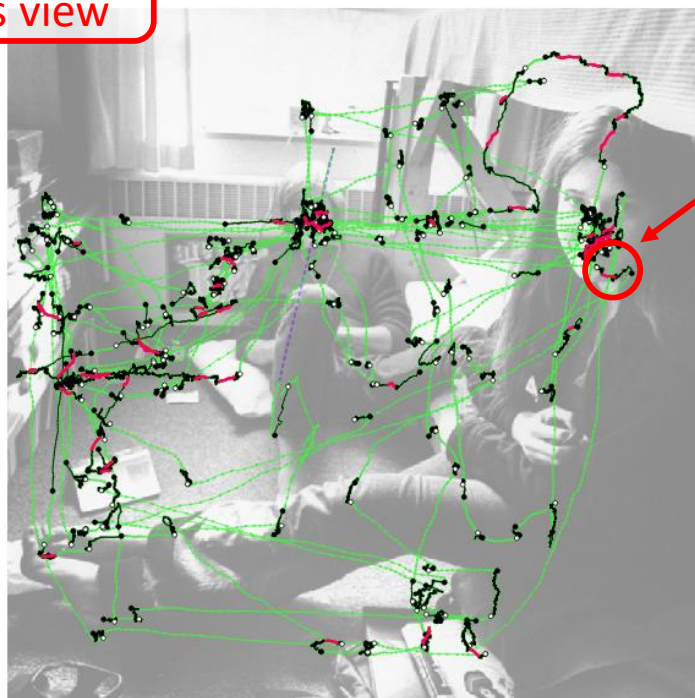


marker: 5.65553°



decade  
memory  
people  
wealth

Explore  
stimulus view



View

## Stimulus View

- ☐ Show Microsaccade Directions
- ☒ Highlight Microsaccade Samples
- ☒ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☐ Show Scanpath

Fixation Size: Duration

Fixation Scale: 

- ☐ Show Saccade Directions
- ☒ Show Sample Connections
- ☒ Show Samples

Image Opacity: 

## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

## Microsaccade Detection

- ☐ Use Microsaccades from Input File

Relative Velocity Threshold 5,00

Minimum Microsaccade Duration [ms] 6

Velocity Window Size [samples] 5

☐ Binocular Microsaccades Only☐ Maximum Microsaccade Duration [ms] 100☐ Minimum Amplitude [°] 0,00☒ Maximum Amplitude [°] 1,00☒ Minimum Inter-Saccadic Interval [ms] 20☐ Minimum Peak Velocity [°/s] 0,00☐ Maximum Peak Velocity [°/s] 300,00☒ Ignore Time at Fixation Start (e.g. Glasses) [ms] 20☐ Ignore Time at Fixation End [ms] 0

Update Microsaccades for Current Trial

Update Microsaccades for Current Participant

Update Microsaccades for all Trials

General

Filter

View

Colors

## Data Plot

Fixations All

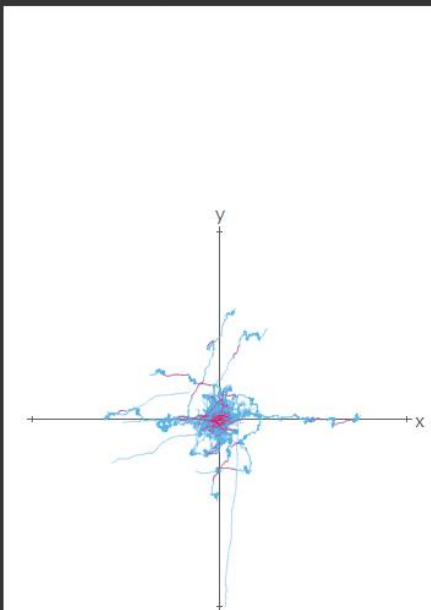
Data Values Gaze Movement (Samples of Fixations)

Direction Screen Coordinate System

Type Movement in Relation to Fixation Center

Marker value (°): 0,00

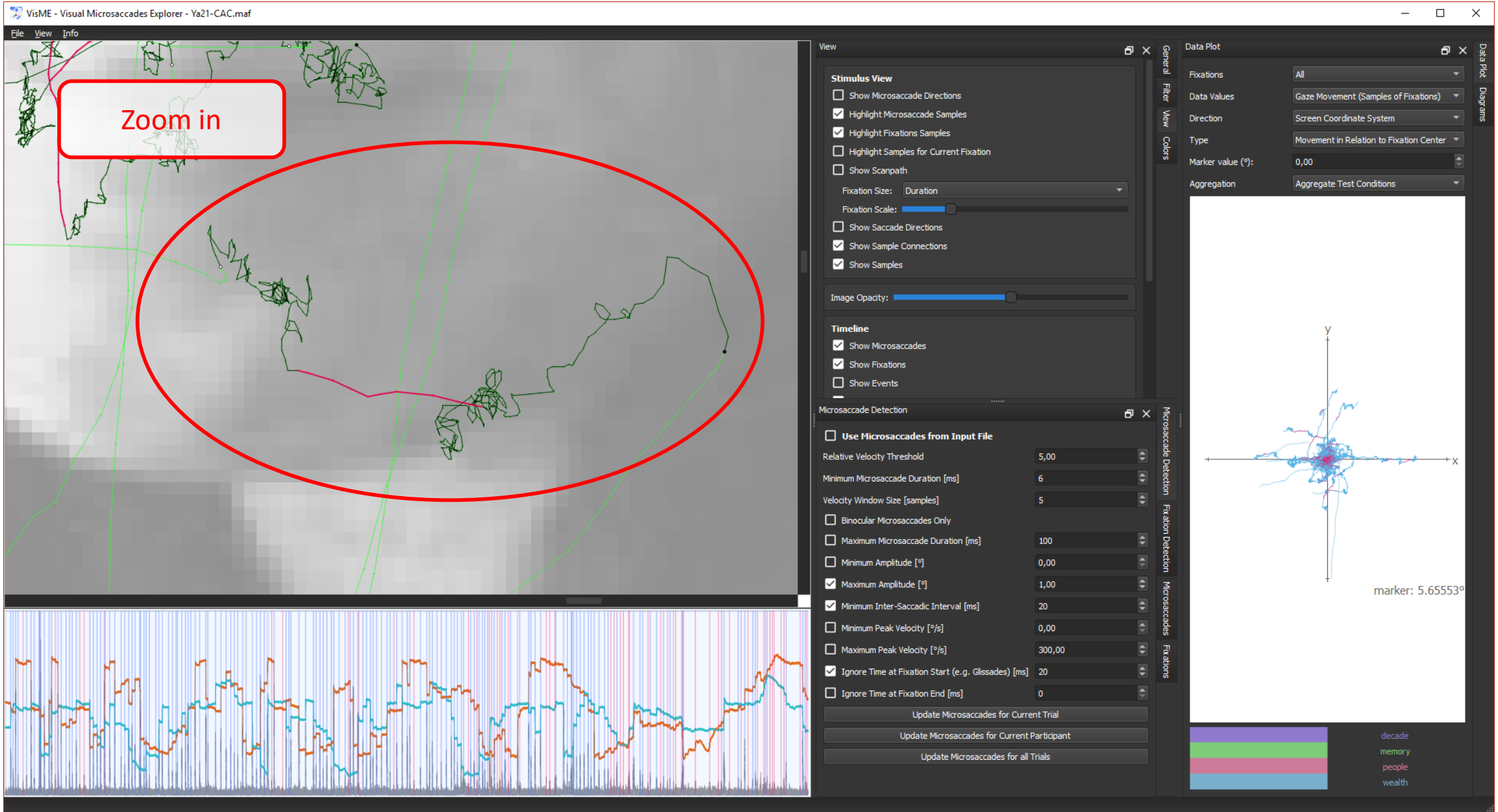
Aggregation Aggregate Test Conditions

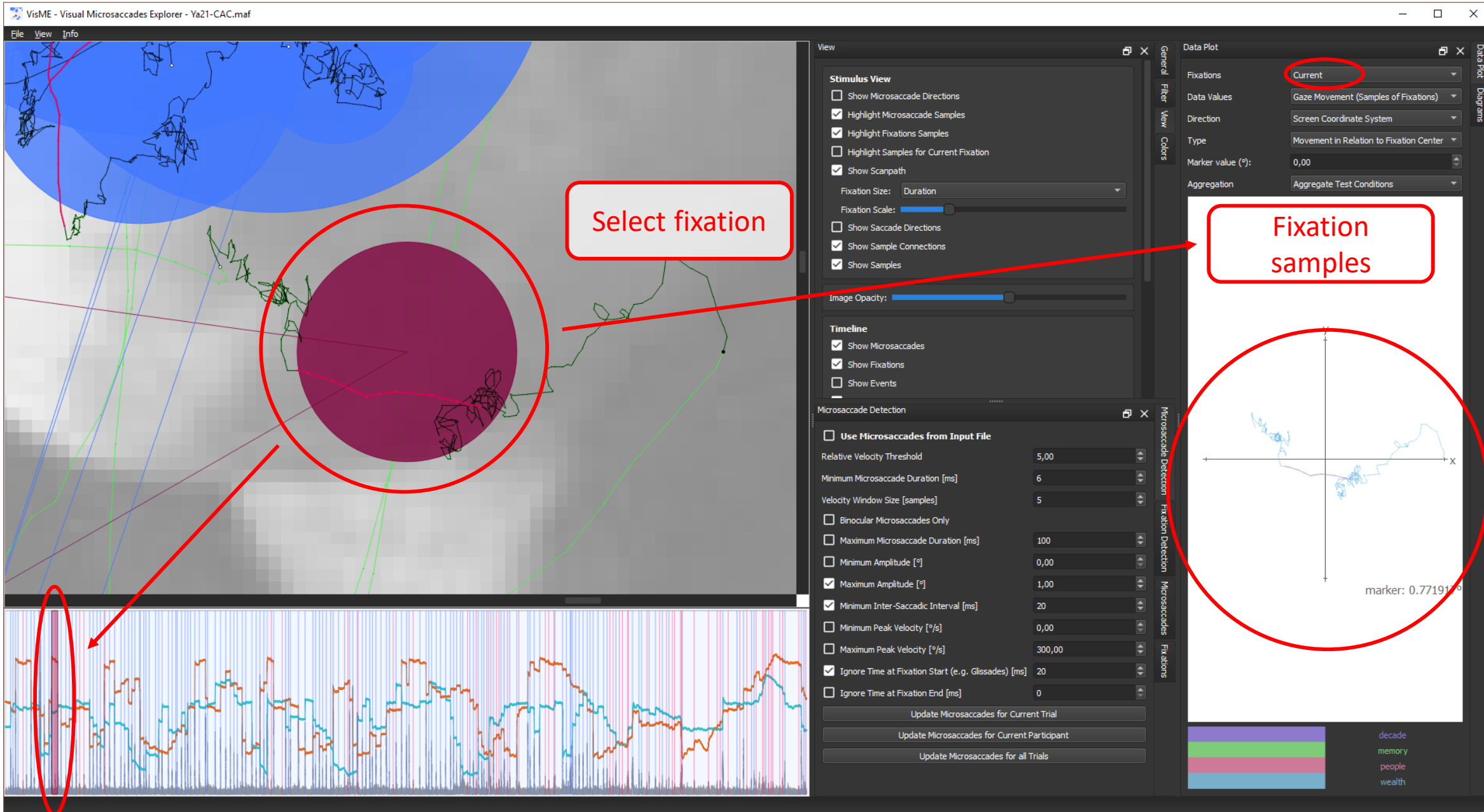


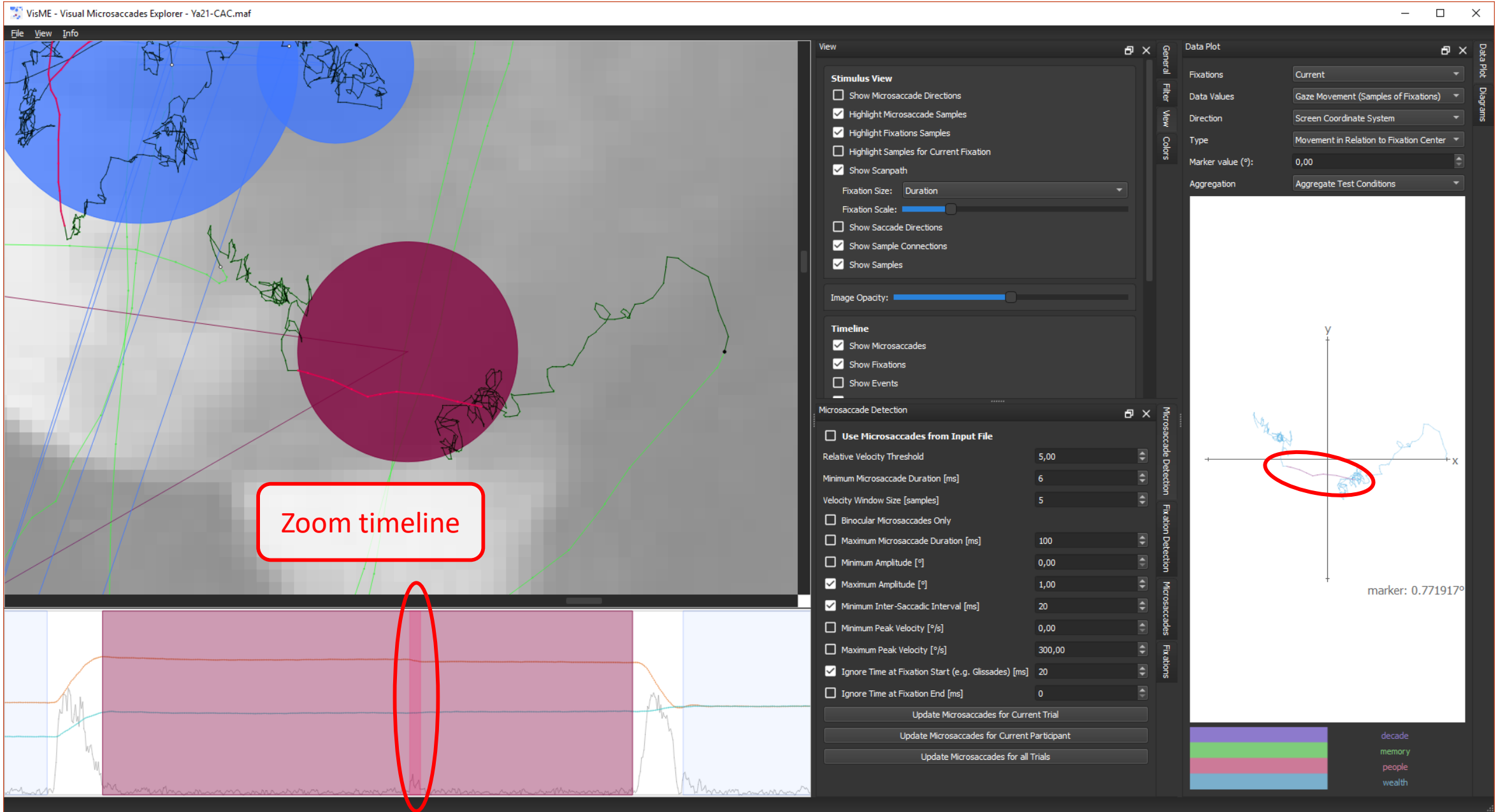
marker: 5.65553°

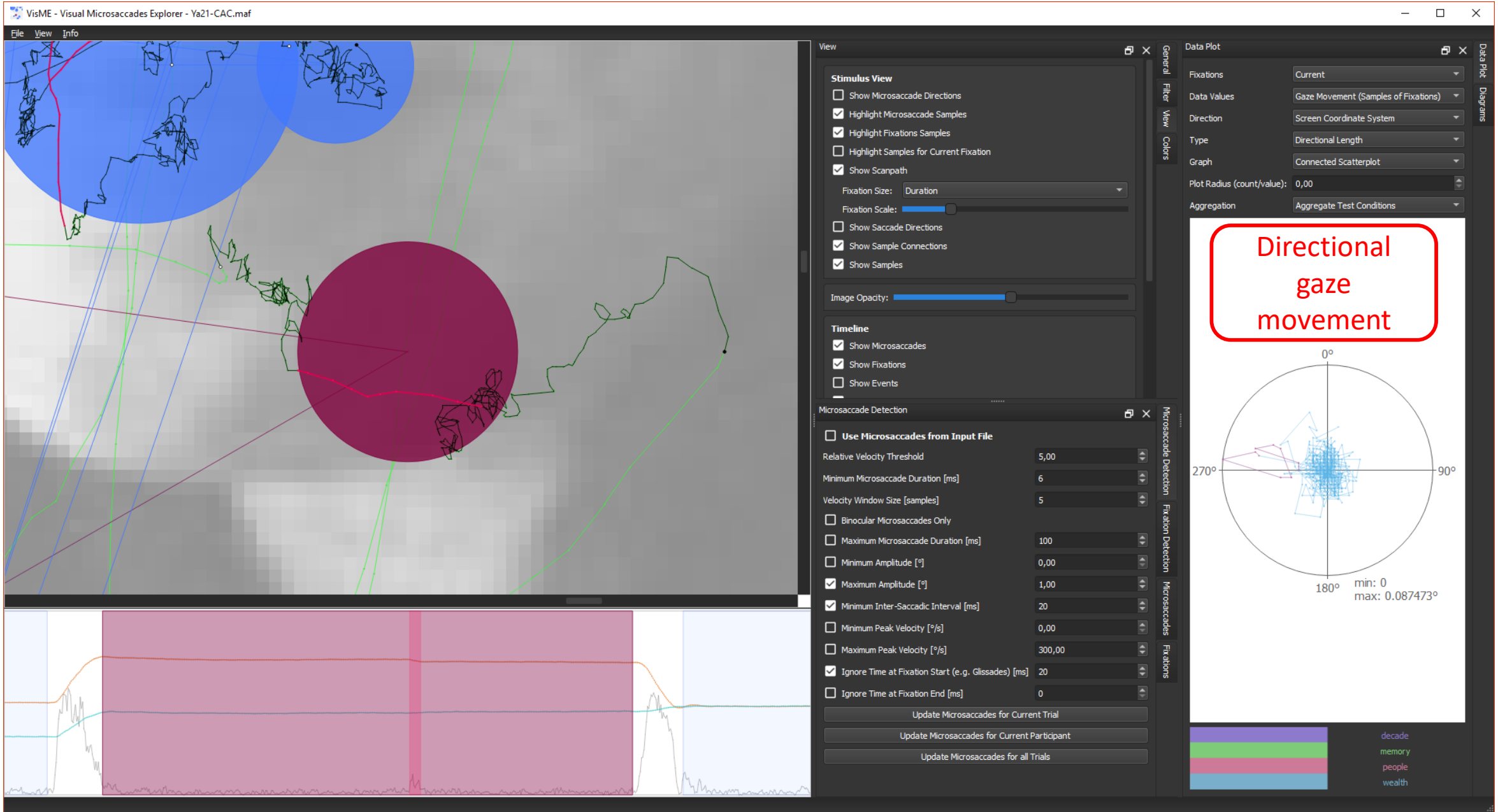


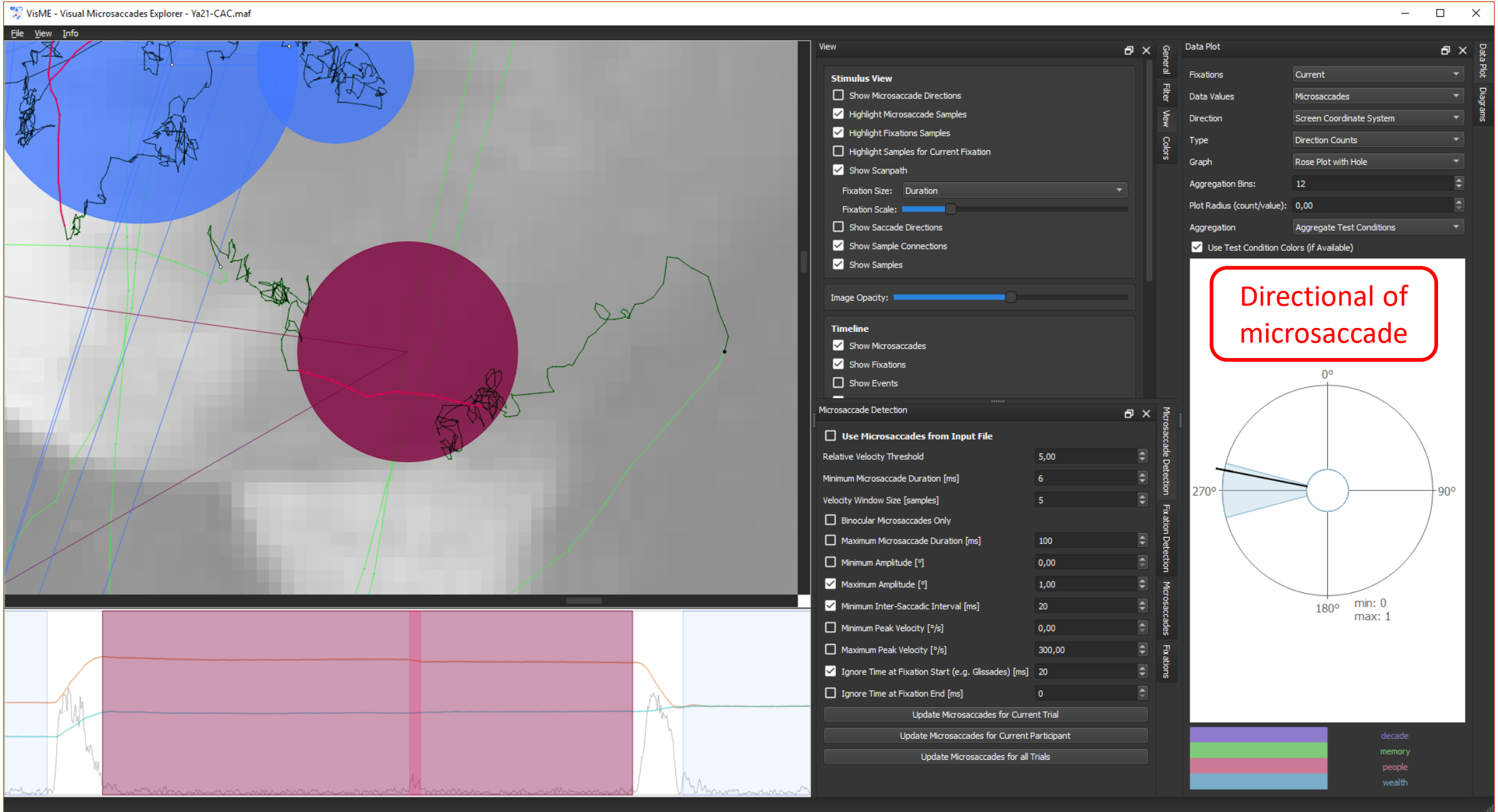
decade  
memory  
people  
wealth

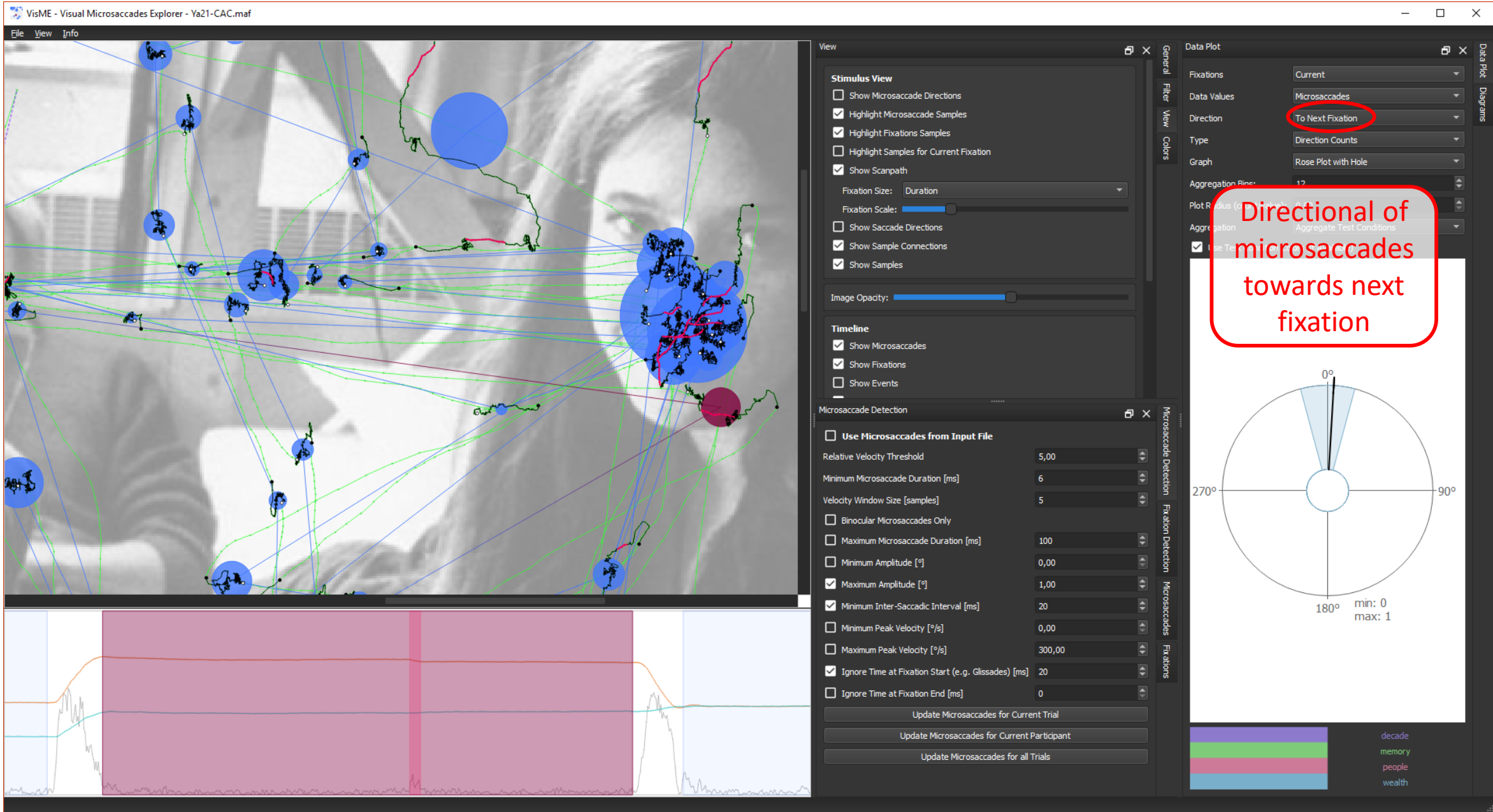


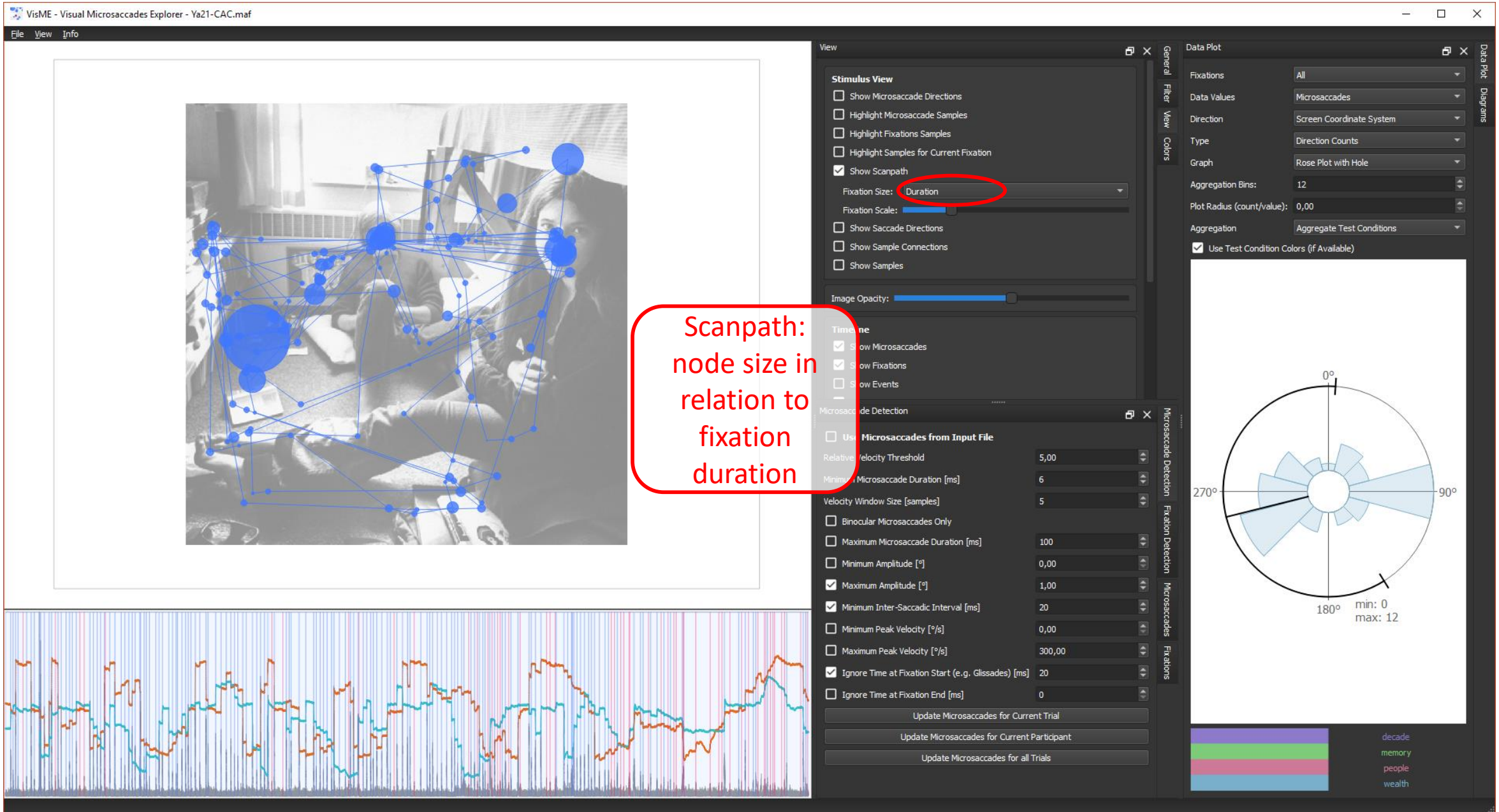


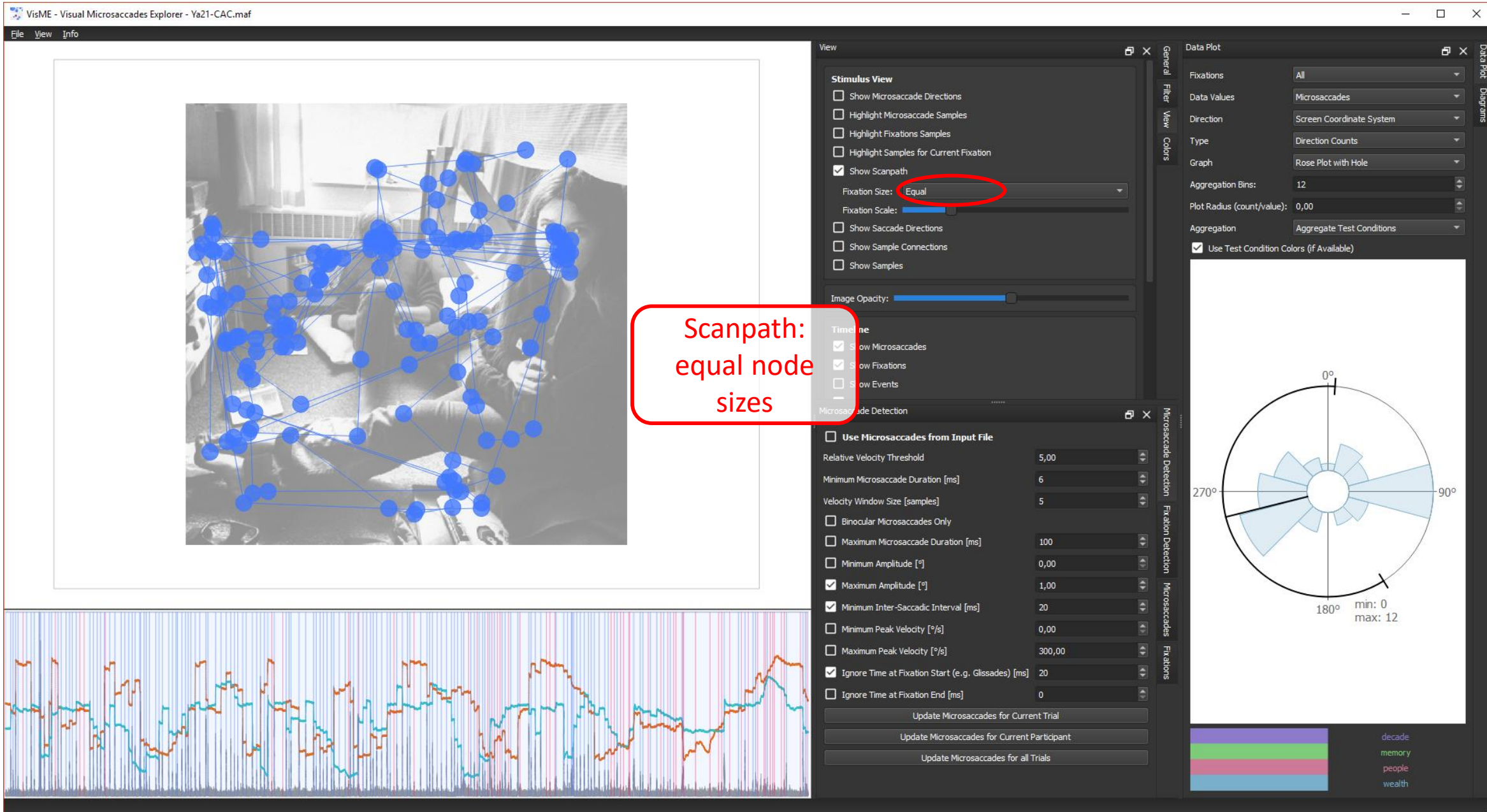


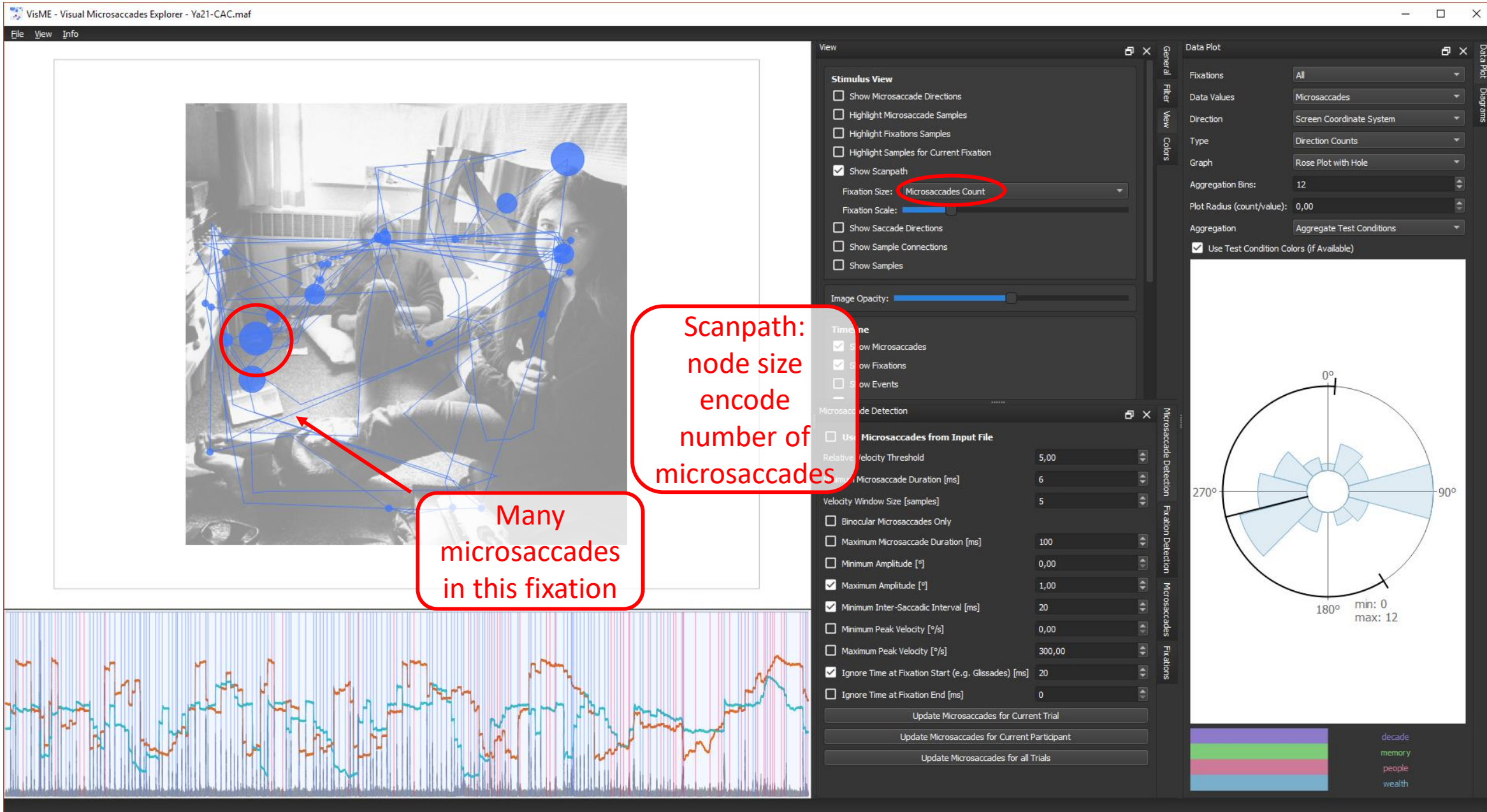


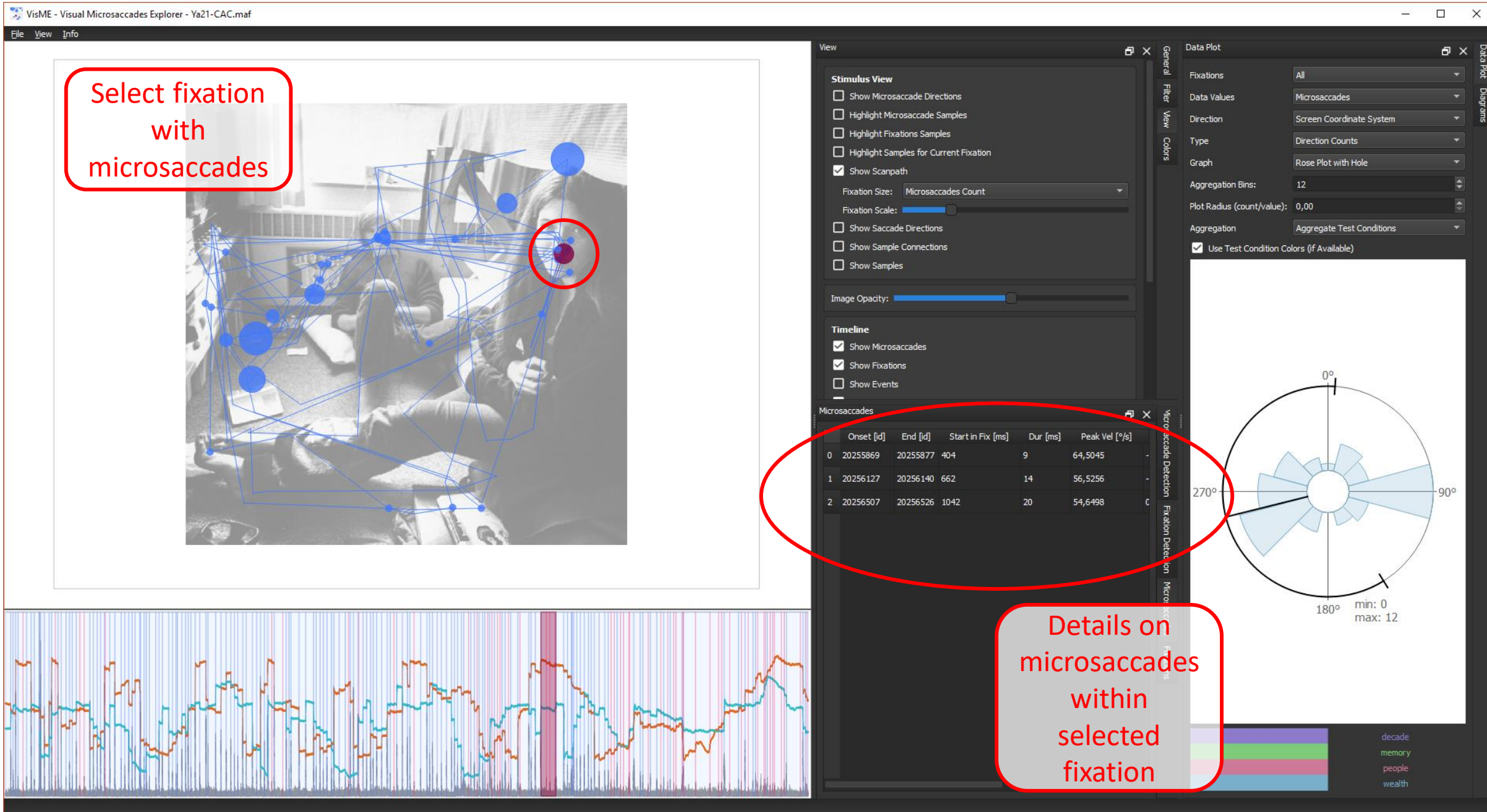






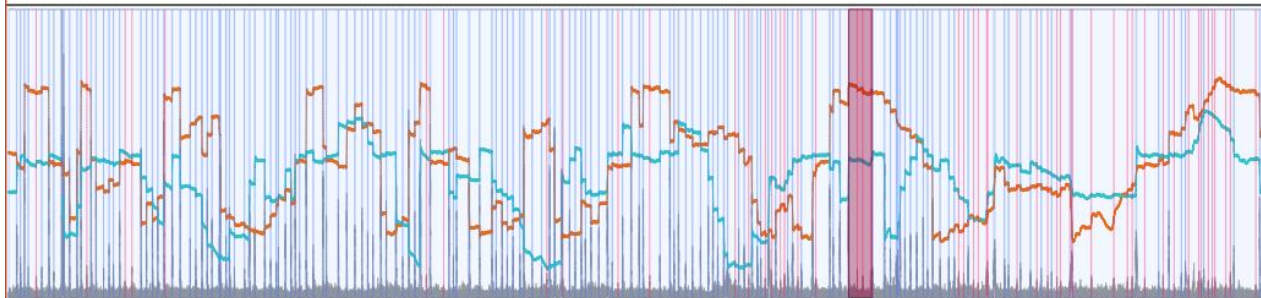








Highlight  
microsaccades



## View

## Stimulus View

- ☐ Show Microsaccade Directions
- ☒ Highlight Microsaccade Samples
- ☐ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☒ Show Scanpath

Fixation Size: Microsaccades Count

Fixation Scale: 

- ☐ Show Saccade Directions
- ☐ Show Sample Connections
- ☐ Show Samples

Image Opacity: 

## Timeline

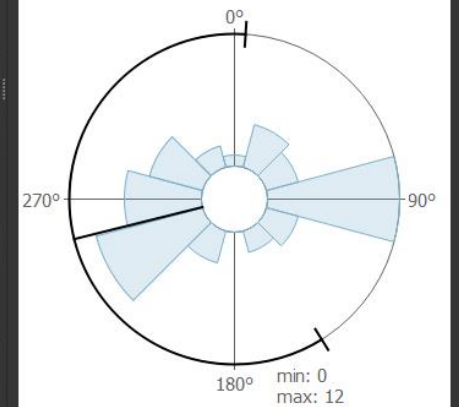
- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

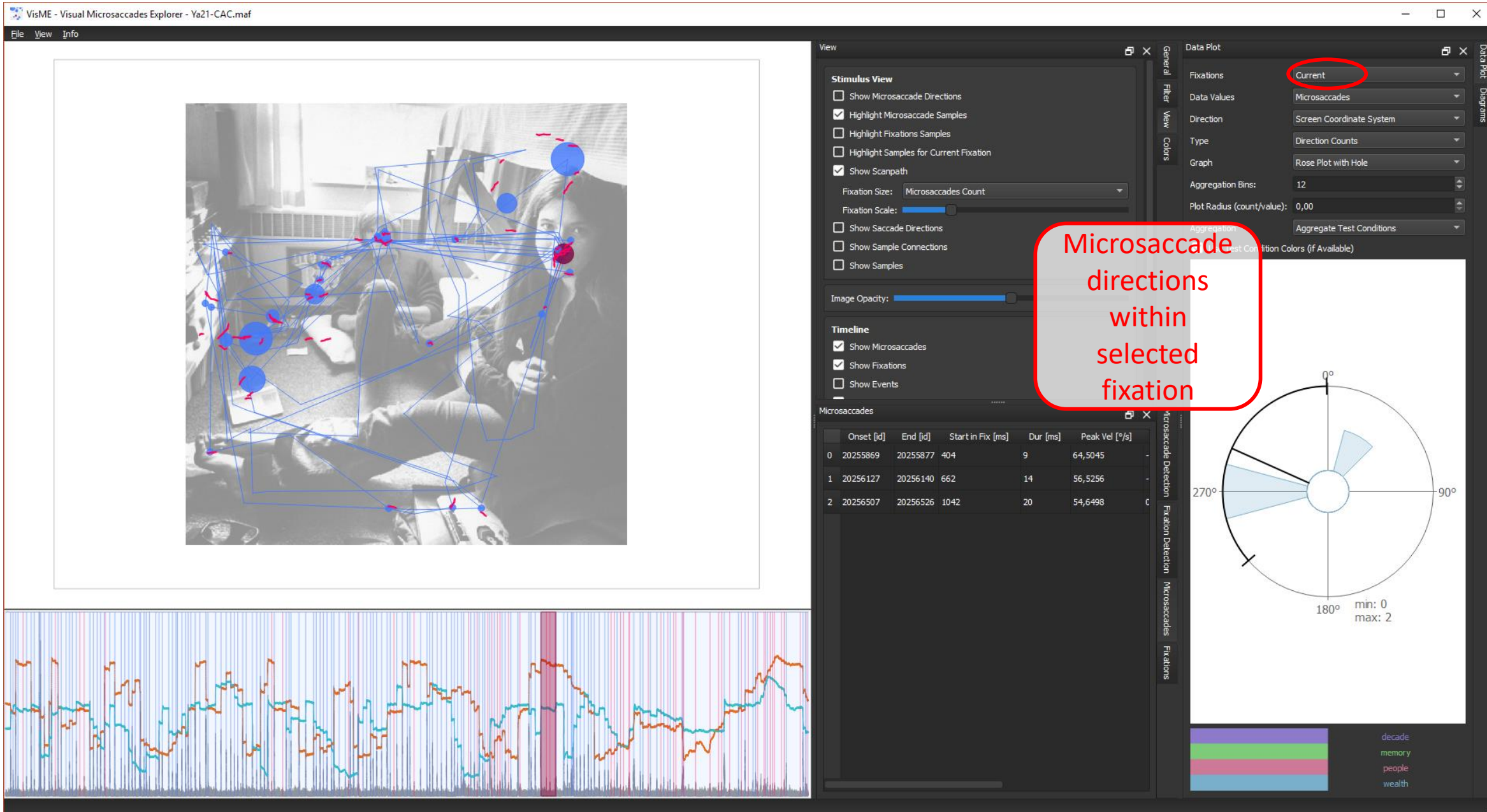
## Microsaccades

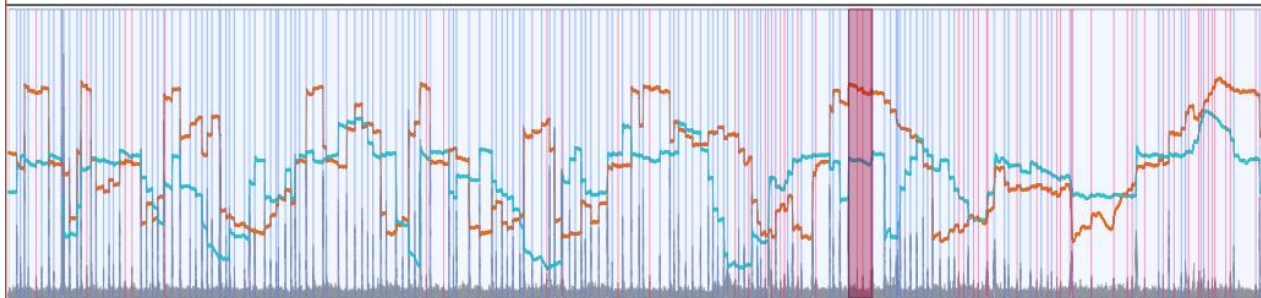
	Onset [id]	End [id]	Start in Fix [ms]	Dur [ms]	Peak Vel [°/s]
0	2025869	2025877	404	9	64,5045
1	20256127	20256140	662	14	56,5256
2	20256507	20256526	1042	20	54,6498

## Data Plot

- Fixations: All
- Data Values: Microsaccades
- Direction: Screen Coordinate System
- Type: Direction Counts
- Graph: Rose Plot with Hole
- Aggregation Bins: 12
- Plot Radius (count/value): 0,00
- Aggregation: Aggregate Test Conditions
- ☒ Use Test Condition Colors (if Available)







## View

## Stimulus View

- ☐ Show Microsaccade Directions
- ☒ Highlight Microsaccade Samples
- ☐ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☒ Show Scanpath

Fixation Size: Microsaccades Count

Fixation Scale: 

- ☐ Show Saccade Directions
- ☐ Show Sample Connections
- ☐ Show Samples

Image Opacity: 

## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

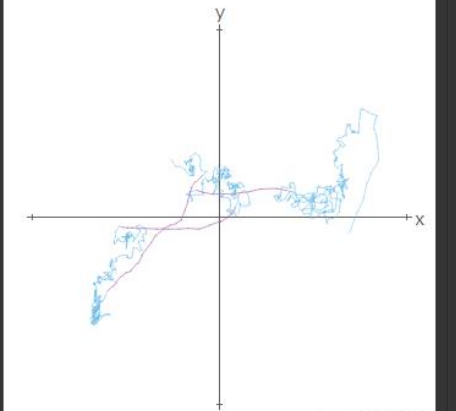
## Microsaccades

	Onset [id]	End [id]	Start in Fix [ms]	Dur [ms]	Peak Vel [°/s]
0	20255869	20255877	404	9	64,5045
1	20256127	20256140	662	14	56,5256
2	20256507	20256526	1042	20	54,6498

## Data Plot

- Fixations: Current
- Data Values: Gaze Movement (Samples of Fixations)
- Direction: Screen Coordinate System
- Type: Movement in Relation to Fixation Center
- Marker value (°): 0,00
- Aggregation: Aggregate Test Conditions

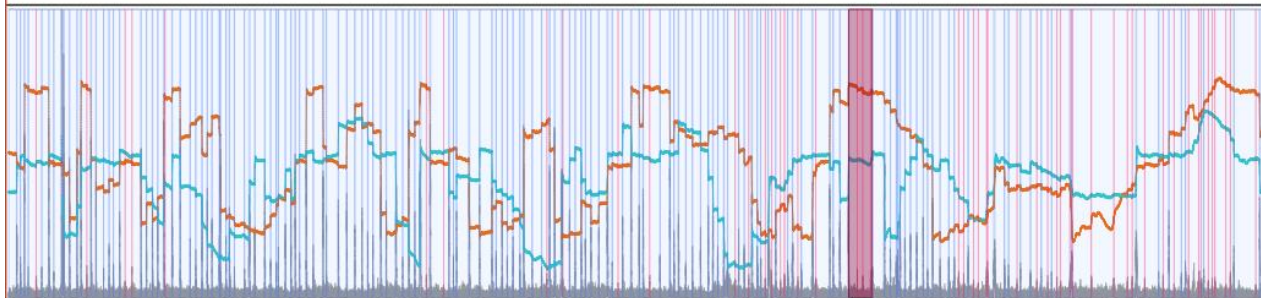
Fixation  
samples



marker: 0.901354°



decade  
memory  
people  
wealth



## View

## Stimulus View

- ☐ Show Microsaccade Directions
- ☒ Highlight Microsaccade Samples
- ☐ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☒ Show Scanpath

Fixation Size: Microsaccades Count

Fixation Scale: 

- ☐ Show Saccade Directions
- ☐ Show Sample Connections
- ☐ Show Samples

Image Opacity: 

## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

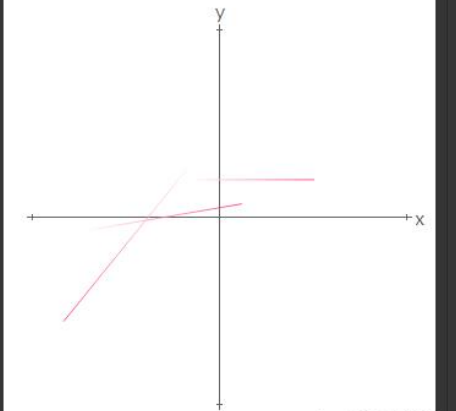
## Microsaccades

	Onset [id]	End [id]	Start in Fix [ms]	Dur [ms]	Peak Vel [°/s]
0	20255869	20255877	404	9	64,5045
1	20256127	20256140	662	14	56,5256
2	20256507	20256526	1042	20	54,6498

## Data Plot

- Fixations: Current
- Data Values: Microsaccades
- Direction: Screen Coordinate System
- Type: Movement in Relation to Fixation Center
- Marker value (°): 0,00
- Aggregation: Aggregate Test Conditions

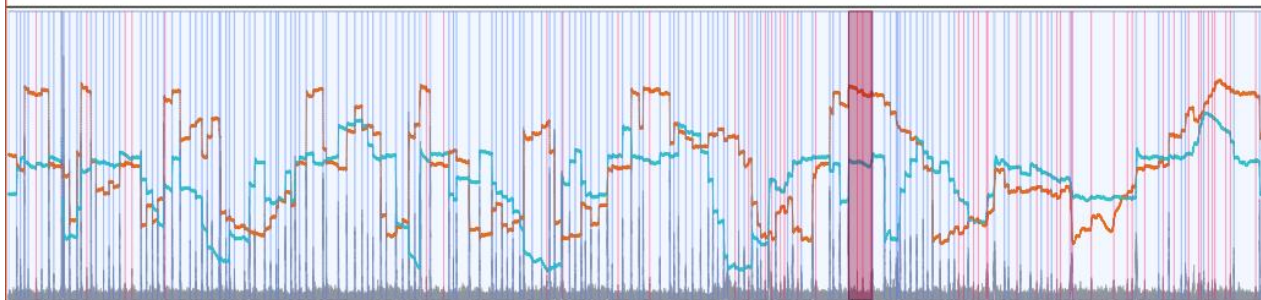
Microsaccade  
directions



marker: 0.644904°



decade  
memory  
people  
wealth



## View

## Stimulus View

- ☐ Show Microsaccade Directions
  - ☒ Highlight Microsaccade Samples
  - ☐ Highlight Fixations Samples
  - ☐ Highlight Samples for Current Fixation
  - ☒ Show Scanpath
- Fixation Size: Microsaccades Count
- Fixation Scale:
- ☐ Show Saccade Directions
  - ☐ Show Sample Connections
  - ☐ Show Samples

Image Opacity: 

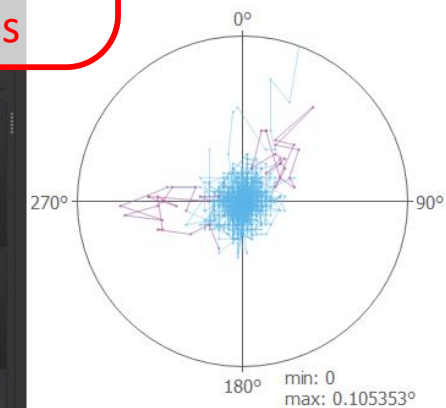
## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

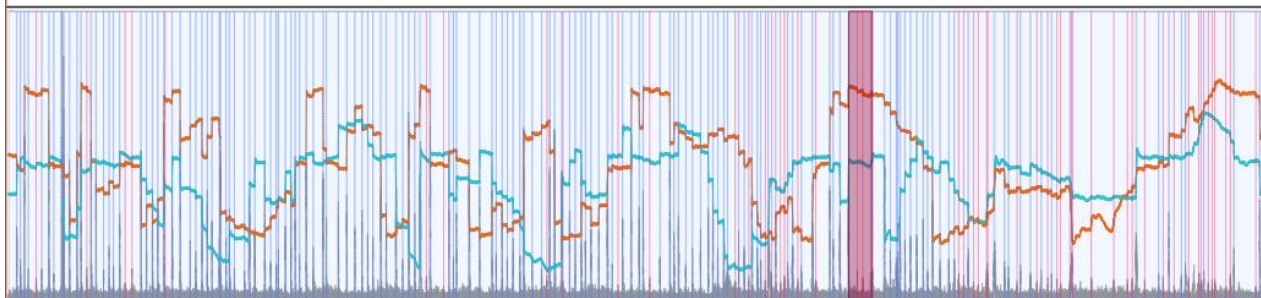
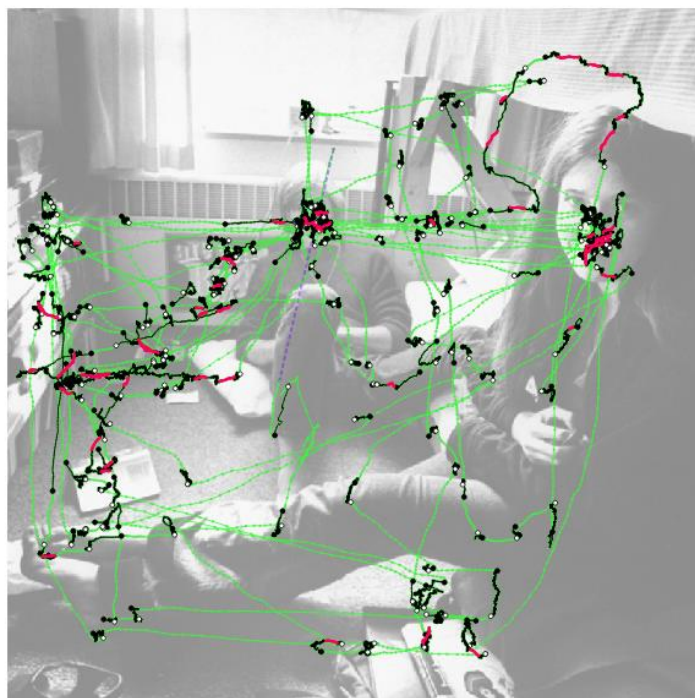
## Microsaccades

	Onset [id]	End [id]	Start in Fix [ms]	Dur [ms]	Peak Vel [°/s]
0	20255869	20255877	404	9	64,5045
1	20256127	20256140	662	14	56,5256
2	20256507	20256526	1042	20	54,6498

Direction plot  
with  
highlighted  
microsaccade  
samples



decade  
memory  
people  
wealth



## View

## Stimulus View

- ☐ Show Microsaccade Directions
- ☒ Highlight Microsaccade Samples
- ☒ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☐ Show Scanpath

Fixation Size: Microsaccades Count

Fixation Scale: 

- ☐ Show Saccade Directions
- ☒ Show Sample Connections
- ☒ Show Samples

Image Opacity: 

## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

## Microsaccades

	Onset [Id]	End [Id]	Start in Fix [ms]	Dur [ms]	Peak Vel [°/s]
0	2025869	2025877	404	9	64,5045
1	20256127	20256140	662	14	56,5256
2	20256507	20256526	1042	20	54,6498

Histogram:  
Microsaccade  
start time

## Diagrams

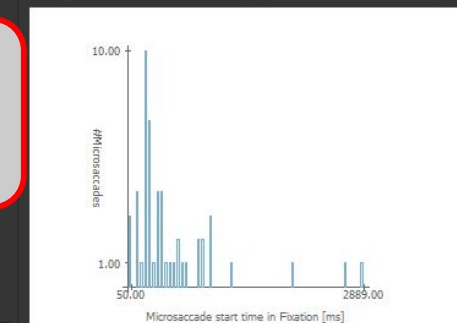
Data for Plots: Microsaccades

On y Axis: Microsaccades start time [ms]

Bin size: 50

Max x: 0,00

Max y: 0,00



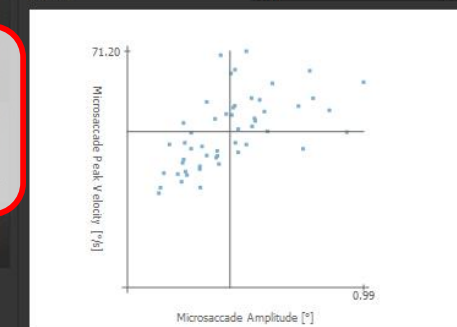
Scatterplot:  
Amplitude –  
Peak velocity

On x Axis: Amplitude [°]

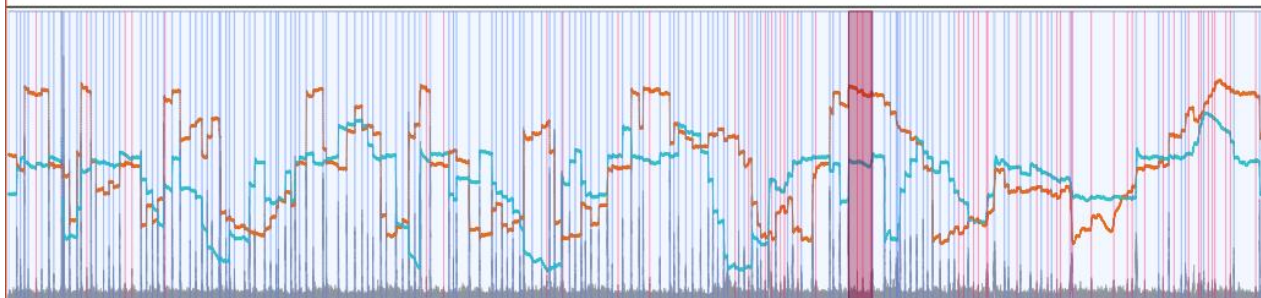
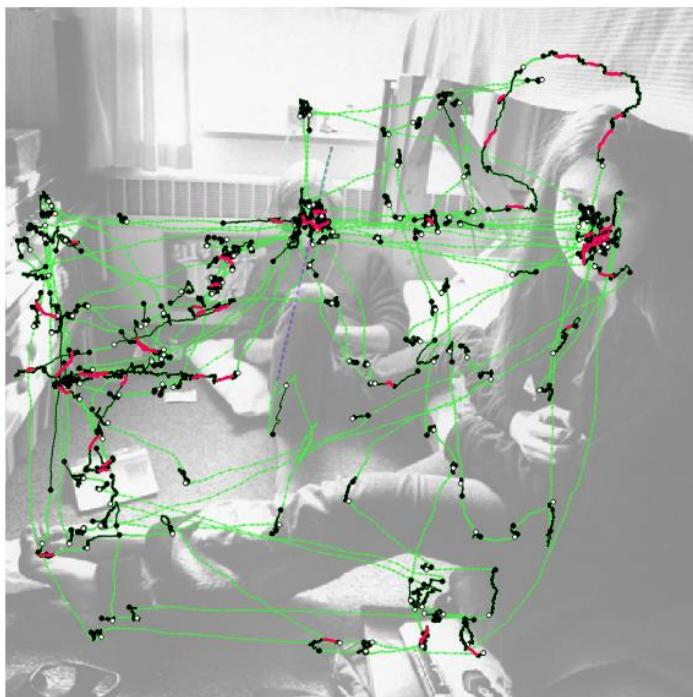
On y Axis: Peak Velocity [°/s]

Max x: 0,00

Max y: 0,00



decade  
memory  
people  
wealth



## View

## Stimulus View

- ☐ Show Microsaccade Directions
- ☒ Highlight Microsaccade Samples
- ☒ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☐ Show Scanpath

Fixation Size: Microsaccades Count

Fixation Scale: 

- ☐ Show Saccade Directions
- ☒ Show Sample Connections
- ☒ Show Samples

Image Opacity: 

## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

## Microsaccades

	Onset [id]	End [id]	Start in Fix [ms]	Dur [ms]	Peak Vel [°/s]	
0	2025869	2025877	404	9	64,5045	-
1	20256127	20256140	662	14	56,5256	-
2	20256507	20256526	1042	20	54,6498	C

Histogram:  
Peak velocity

## Diagrams

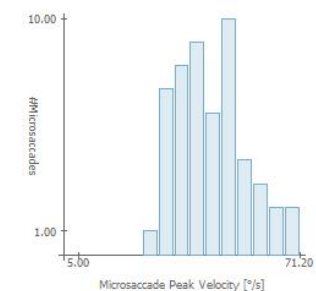
Data for Plots: Microsaccades

On y Axis: Peak Velocity [°/s]

Bin size: 5,000

Max x: 0,00

Max y: 0,00

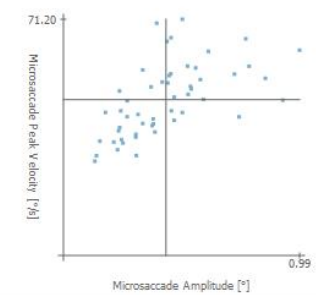


On x Axis: Amplitude [°]

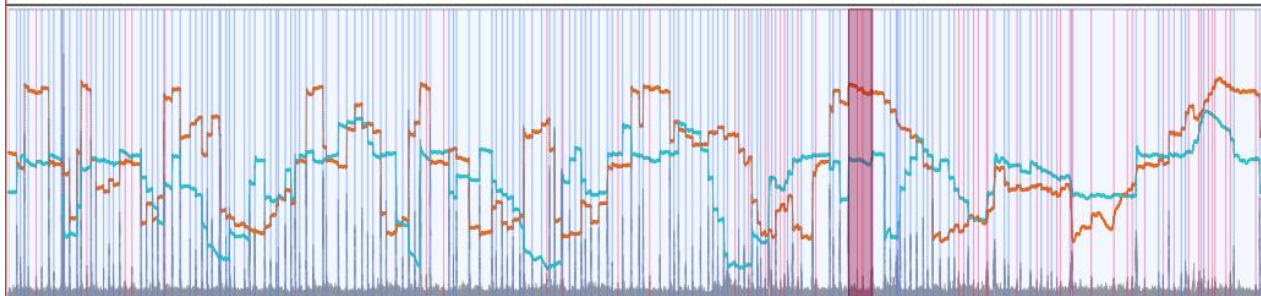
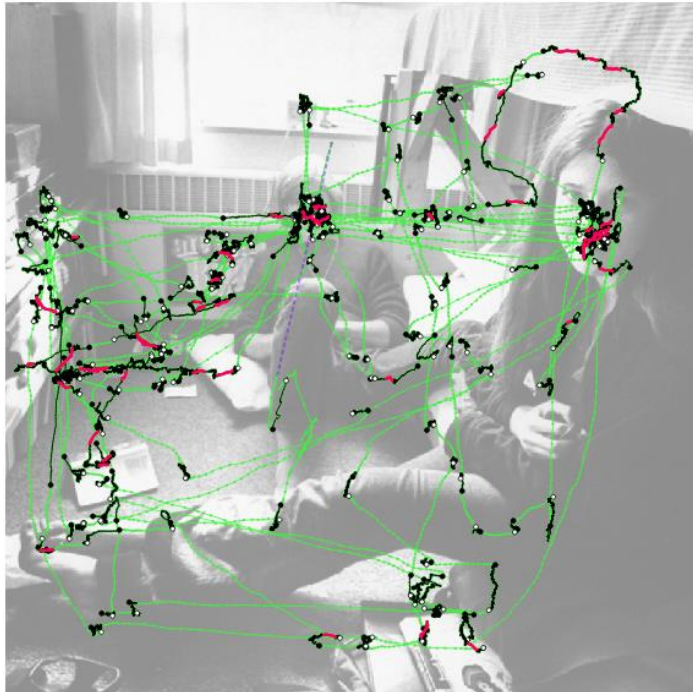
On y Axis: Peak Velocity [°/s]

Max x: 0,00

Max y: 0,00



decade  
memory  
people  
wealth



## View

## Stimulus View

- ☐ Show Microsaccade Directions
- ☒ Highlight Microsaccade Samples
- ☒ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☐ Show Scanpath

Fixation Size: Microsaccades Count

Fixation Scale: 

- ☐ Show Saccade Directions
- ☒ Show Sample Connections
- ☒ Show Samples

Image Opacity: 

## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

## Microsaccades

	Onset [id]	End [id]	Start in Fix [ms]	Dur [ms]	Peak Vel [°/s]
0	2025869	2025877	404	9	64,5045
1	20256127	20256140	662	14	56,5256
2	20256507	20256526	1042	20	54,6498

Histogram:  
Duration

## Diagrams

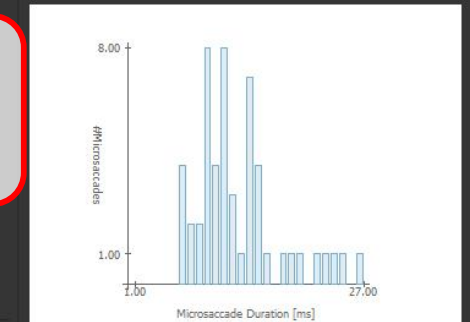
Data for Plots: Microsaccades

On y Axis: Duration [ms]

Bin size: 1

Max x: 0,00

Max y: 0,00

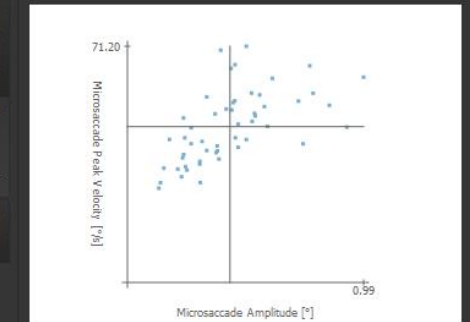


On x Axis: Amplitude [°]

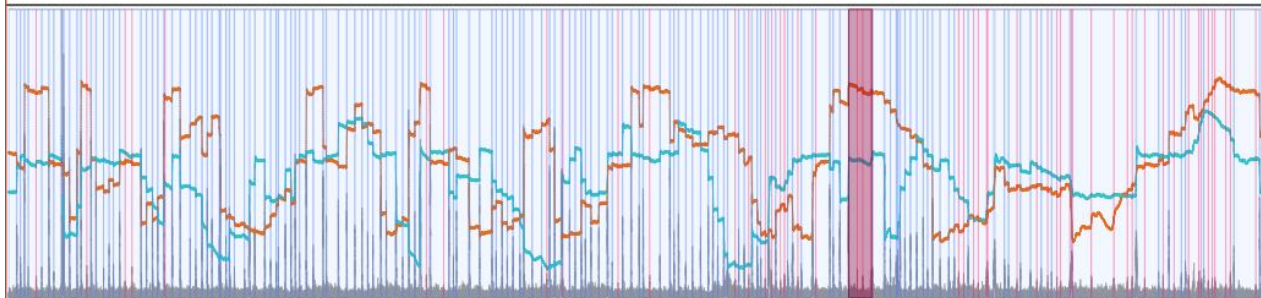
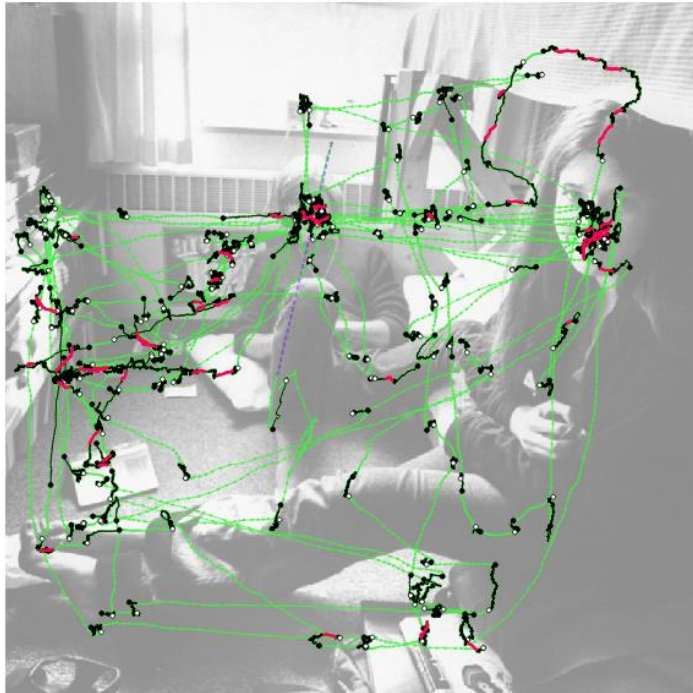
On y Axis: Peak Velocity [°/s]

Max x: 0,00

Max y: 0,00



decade  
memory  
people  
wealth



## View

## Stimulus View

- ☐ Show Microsaccade Directions
- ☒ Highlight Microsaccade Samples
- ☒ Highlight Fixations Samples
- ☐ Highlight Samples for Current Fixation
- ☐ Show Scanpath

Fixation Size: Microsaccades Count

Fixation Scale: 

- ☐ Show Saccade Directions
- ☒ Show Sample Connections
- ☒ Show Samples

Image Opacity: 

## Timeline

- ☒ Show Microsaccades
- ☒ Show Fixations
- ☐ Show Events

## Microsaccades

	Onset [id]	End [id]	Start in Fix [ms]	Dur [ms]	Peak Vel [°/s]
0	2025869	2025877	404	9	64,5045
1	20256127	20256140	662	14	56,5256
2	20256507	20256526	1042	20	54,6498

Histogram:  
Amplitude

## Diagrams

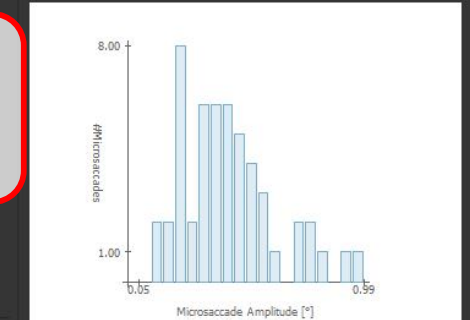
Data for Plots: Microsaccades

On y Axis: Amplitude [°]

Bin size: 0,050

Max x: 0,00

Max y: 0,00

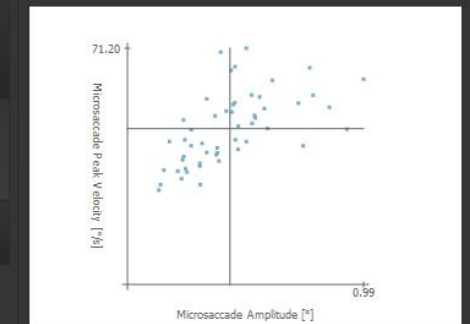


On x Axis: Amplitude [°]

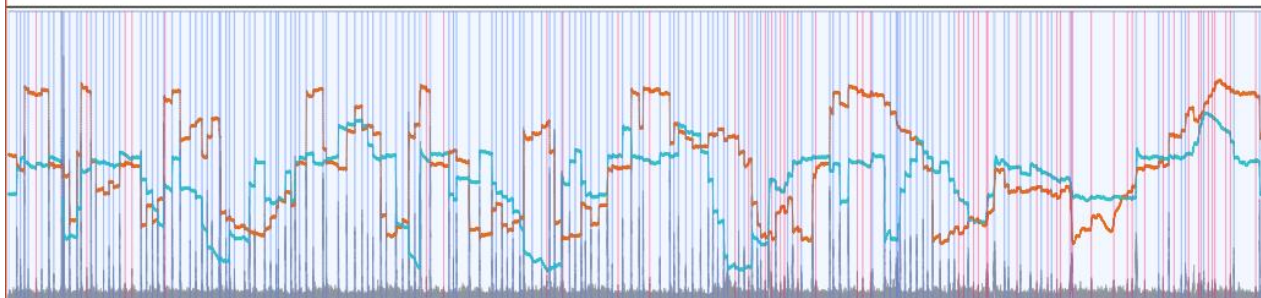
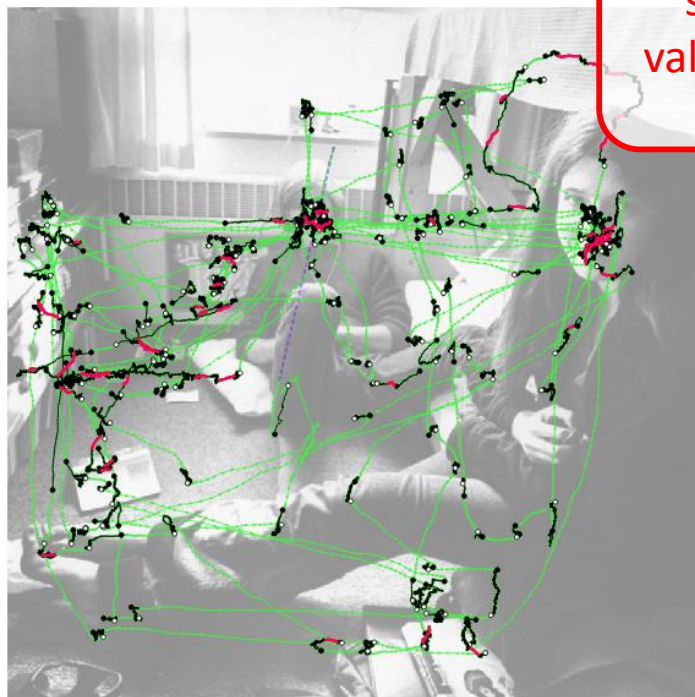
On y Axis: Peak Velocity [°/s]

Max x: 0,00

Max y: 0,00



decade  
memory  
people  
wealth



## General

## Data

Number of Trials: 1  
Screen Resolution: 1280 x 960  
Frequency: 1000 Hz

## Statistics

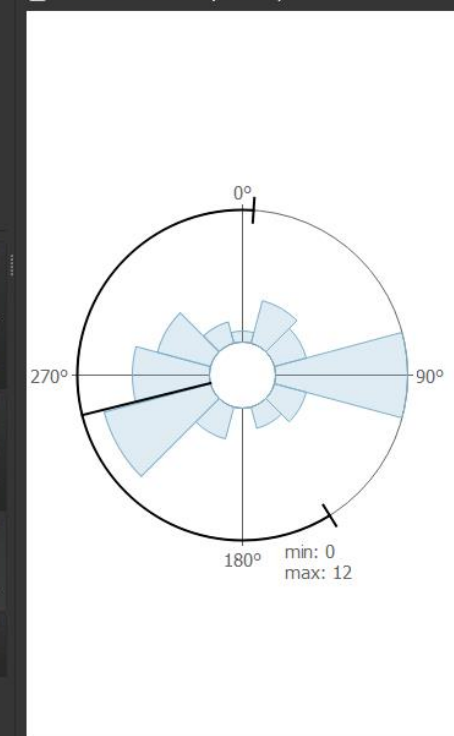
	Min	Max	Mean	Stdev
#Raw Data Samples in Trials:	60259	60259	60259.00	60259.00
Duration of Trials [s]:	60.29	60.29	60.29	60.29
#Fixations in Trials:	154	154	154.00	154.00
#Fixations with Microsaccades in Trials:	32	32	32.00	32.00
Fixations containing Microsaccades [%]:	20.78	20.78	20.78	20.78
Fixation Duration [s]:	0.01	3.06	0.37	0.37
Fixation (with Microsaccades) Duration [s]:	0.21	3.06	0.73	0.73
#Microsaccades in Trials:	52	52	52.00	52.00
#Microsaccades per Fixation:	0	5	0.34	0.34
#Microsaccades per Fixation with Microsaccades:	1	5	1.63	1.63
#Microsaccades per Second (for Trials):	0.86	0.86	0.86	0.86
#Microsaccades per Second in Fixations (for Trials):	0.92	0.92	0.92	0.92
Microsaccade Amplitude [°]:	0.13	0.99	0.43	0.43
Inter-saccade Interval [ms]:	46.00	1055.00	347.75	222.22

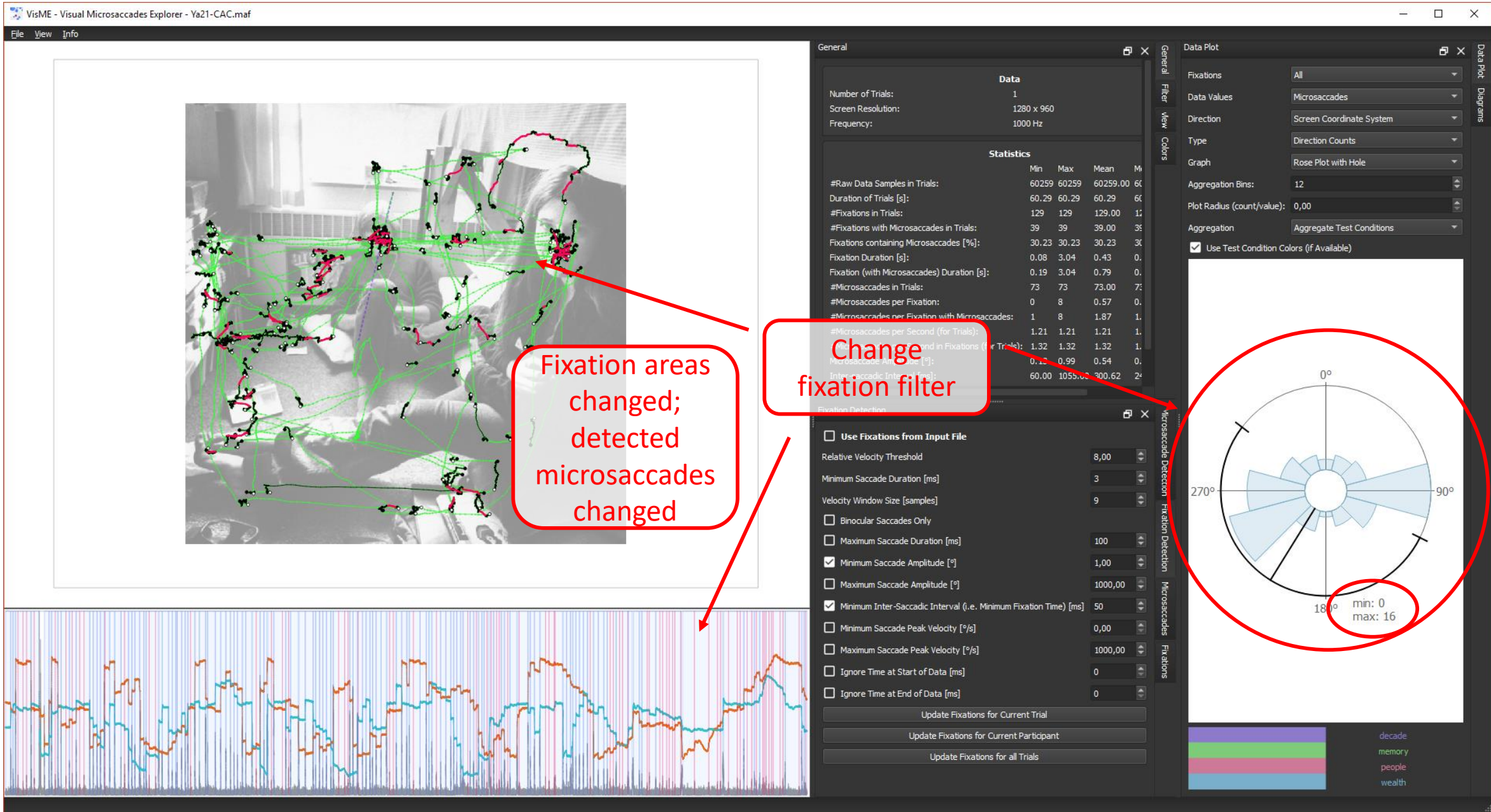
## Microsaccades

	Onset [id]	End [id]	Start in Fix [ms]	Dur [ms]	Peak Vel [°/s]
0	20216556	20216571	368	16	53,0077
1	20218983	20218992	255	10	65,6267
2	20220814	20220824	244	11	39,1351
3	20221146	20221154	576	9	70,0106
4	20222730	20222735	29	6	28,415
5	20235237	20235247	253	11	54,2087
6	20236066	20236071	618	6	30,0738
7	20241011	20241019	244	9	50,8086
8	20241777	20241783	21	7	43,6077
9	20244419	20244424	274	6	34,4418
10	20245927	20245938	293	12	54,7458
11	20250016	20250033	346	18	47,0286
12	20250672	20250682	200	11	52,2785
13	20251462	20251474	203	13	47,7175

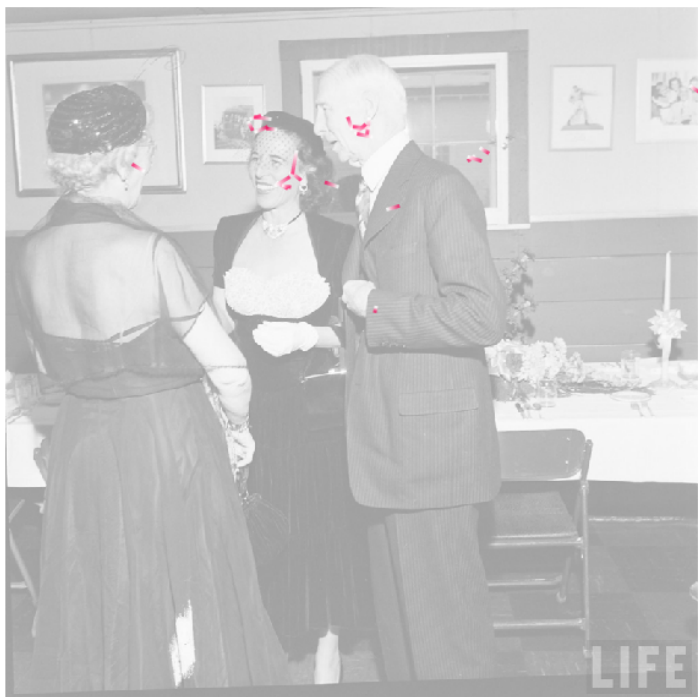
## Data Plot

Fixations: All  
Data Values: Microsaccades  
Direction: Screen Coordinate System  
Type: Direction Counts  
Graph: Rose Plot with Hole  
Aggregation Bins: 12  
Plot Radius (count/value): 0,00  
Aggregation: Aggregate Test Conditions  
☒ Use Test Condition Colors (if Available)





# Multiple Trials Exploration



## Filter

## Data

☐ Trial ☒ Group

Participants:

☒ Ya21-CAC.asc  
☒ Ya21-JMW.asc  
☒ Ya21-JNV.asc  
☒ Ya21-MMK.asc

Check All Uncheck All

Trials:

☒ 0  
☒ 1  
☒ 2  
☒ 3  
☒ 4

Check All Uncheck All

Test Conditions:

☒ decade  
☒ memory  
☒ people  
☒ wealth

Check All Uncheck All

Update

## Fixation Detection

☒ Use Fixations from Input File

Relative Velocity Threshold

8,00

Minimum Saccade Duration [ms]

3

Velocity Window Size [samples]

9

☐ Binocular Saccades Only☐ Maximum Saccade Duration [ms]

100

☒ Minimum Saccade Amplitude [°]

1,00

☐ Maximum Saccade Amplitude [°]

1000,00

☒ Minimum Inter-Saccadic Interval (i.e. Minimum Fixation Time) [ms]

50

☐ Minimum Saccade Peak Velocity [°/s]

0,00

☐ Maximum Saccade Peak Velocity [°/s]

1000,00

☐ Ignore Time at Start of Data [ms]

0

☐ Ignore Time at End of Data [ms]

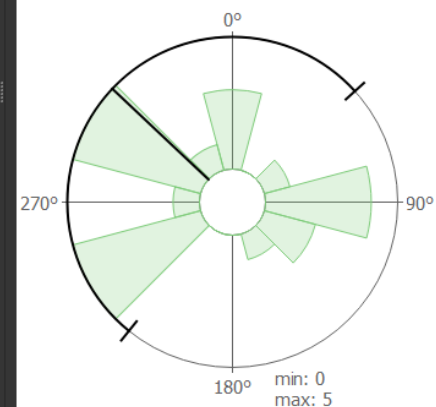
0

Update Fixations for Current Trial

Update Fixations for Current Participant

Update Fixations for all Trials

Change to  
group mode  
to explore  
multiple trials



decade  
memory  
people  
wealth



## Filter

## Data

☐ Trial ☒ Group

Participants:

- ☒ Ya21-CAC.asc
- ☒ Ya21-JMW.asc
- ☒ Ya21-JNV.asc
- ☒ Ya21-MMK.asc

Check All

Uncheck All

Trials:

- ☒ 1
- ☐ 2
- ☐ 3
- ☐ 4

Check All

Uncheck All

Test Conditions:

- ☒ decade
- ☒ memory
- ☒ people
- ☒ wealth

Check All

Uncheck All

Trial 1 for all participants

Update

## Fixation Detection

☒ Use Fixations from Input File

Relative Velocity Threshold

8,00

Minimum Saccade Duration [ms]

3

Velocity Window Size [samples]

9

☐ Binocular Saccades Only☐ Maximum Saccade Duration [ms]

100

☒ Minimum Saccade Amplitude [°]

1,00

☐ Maximum Saccade Amplitude [°]

1000,00

☒ Minimum Inter-Saccadic Interval (i.e. Minimum Fixation Time) [ms]

50

☐ Minimum Saccade Peak Velocity [°/s]

0,00

☐ Maximum Saccade Peak Velocity [°/s]

1000,00

☐ Ignore Time at Start of Data [ms]

0

☐ Ignore Time at End of Data [ms]

0

Update Fixations for Current Trial

Update Fixations for Current Participant

Update Fixations for all Trials

## Data Plot

Fixations

All

Data Values

Microsaccades

Direction

Screen Coordinate System

Type

Direction Counts

Graph

Rose Plot with Hole

Aggregation Bins:

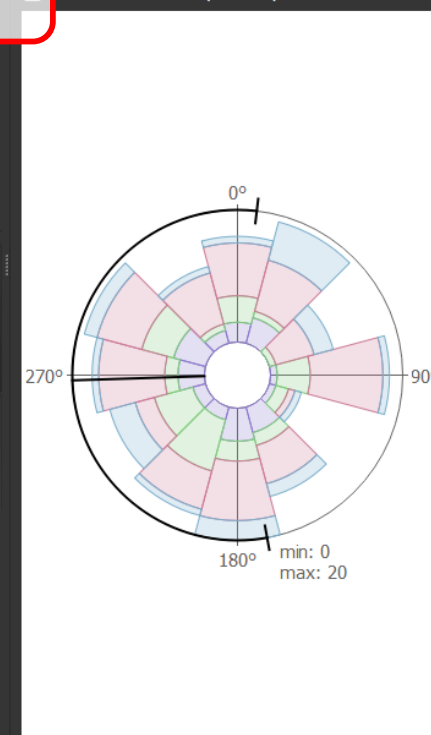
12

Plot Radius (count/value):

0,00

Aggregation

Aggregate Test Conditions

☒ Use Test Condition Colors (if Available)

decade  
memory  
people  
wealth



## Filter

## Data

☐ Trial ☒ Group

## Participants:

- ☒ Ya21-CAC.asc
- ☒ Ya21-JMW.asc
- ☒ Ya21-JNV.asc
- ☒ Ya21-MMK.asc

Check All

Uncheck All

## Trials:

- ☒ 0
- ☒ 1
- ☒ 2
- ☒ 3
- ☒ 4

Check All

Uncheck All

## Test Conditions:

- ☒ decade
- ☒ memory
- ☒ people
- ☒ wealth

Check All

Uncheck All

Update

## Fixation Detection

☒ Use Fixations from Input File

Relative Velocity Threshold

8,00

Minimum Saccade Duration [ms]

3

Velocity Window Size [samples]

9

☐ Binocular Saccades Only☐ Maximum Saccade Duration [ms]

100

☒ Minimum Saccade Amplitude [°]

1,00

☐ Maximum Saccade Amplitude [°]

1000,00

☒ Minimum Inter-Saccadic Interval (i.e. Minimum Fixation Time) [ms]

50

☐ Minimum Saccade Peak Velocity [°/s]

0,00

☐ Maximum Saccade Peak Velocity [°/s]

1000,00

☐ Ignore Time at Start of Data [ms]

0

☐ Ignore Time at End of Data [ms]

0

Update Fixations for Current Trial

Update Fixations for Current Participant

Update Fixations for all Trials

## Data Plot

Fixations

All

Data Values

Microsaccades

Direction

Screen Coordinate System

Type

Direction Counts

Graph

Polar Plot

Aggregation Bins:

12

Plot Radius (count/value):

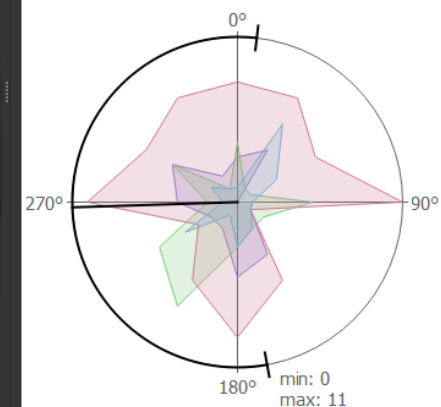
0,00

Aggregation

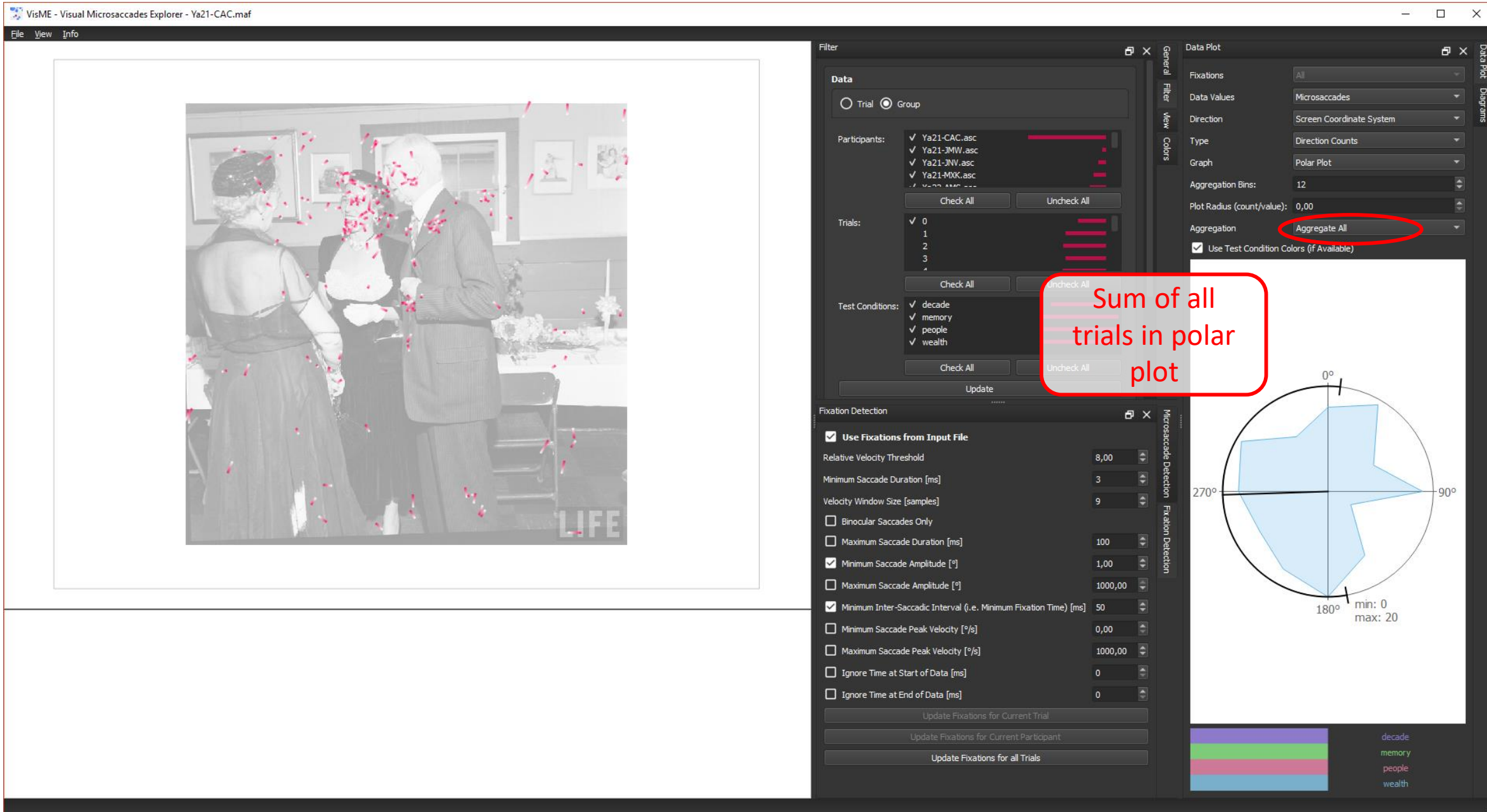
Aggregate Test Conditions

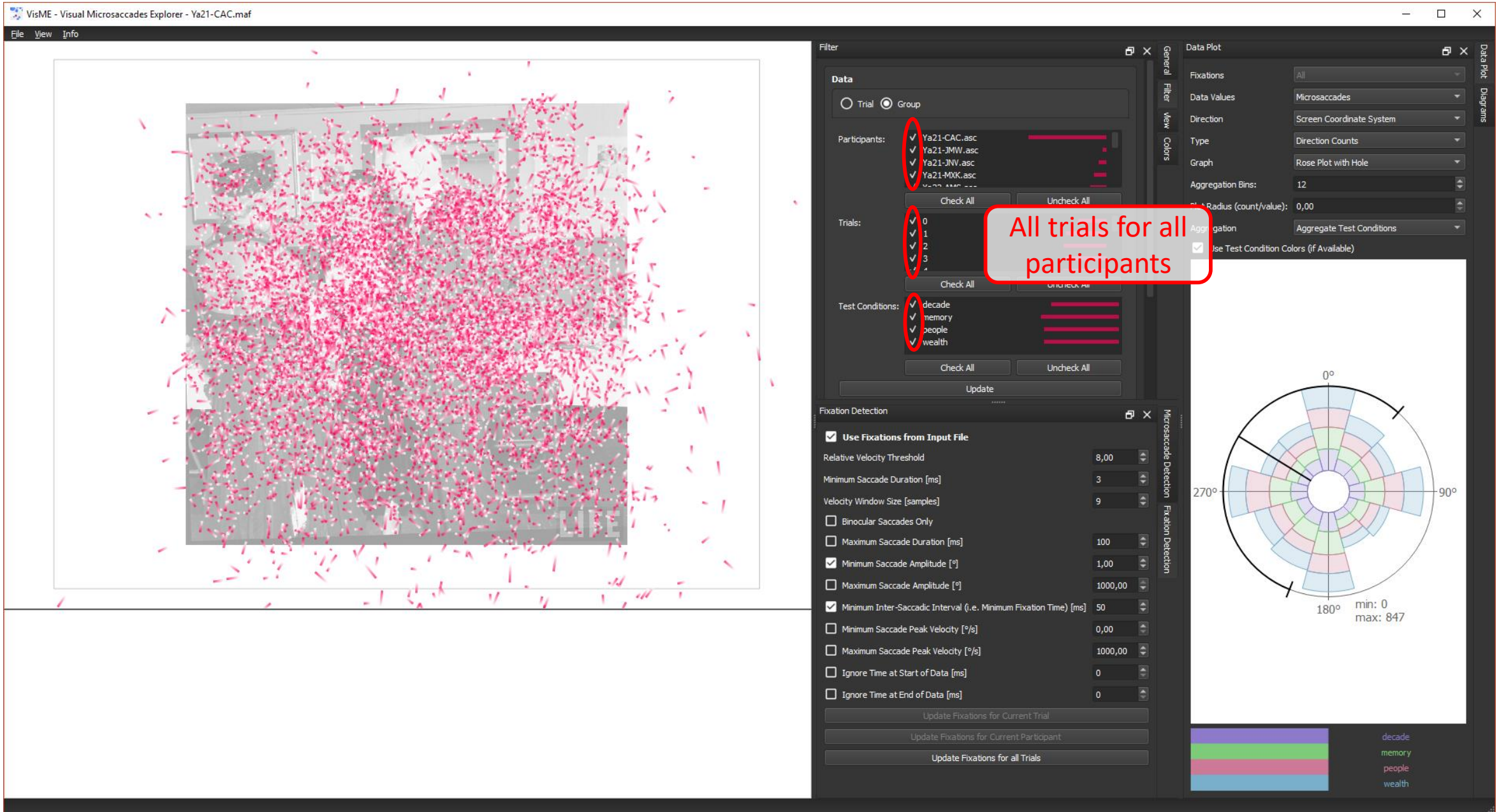
☒ Use Test Condition Colors (if Available)

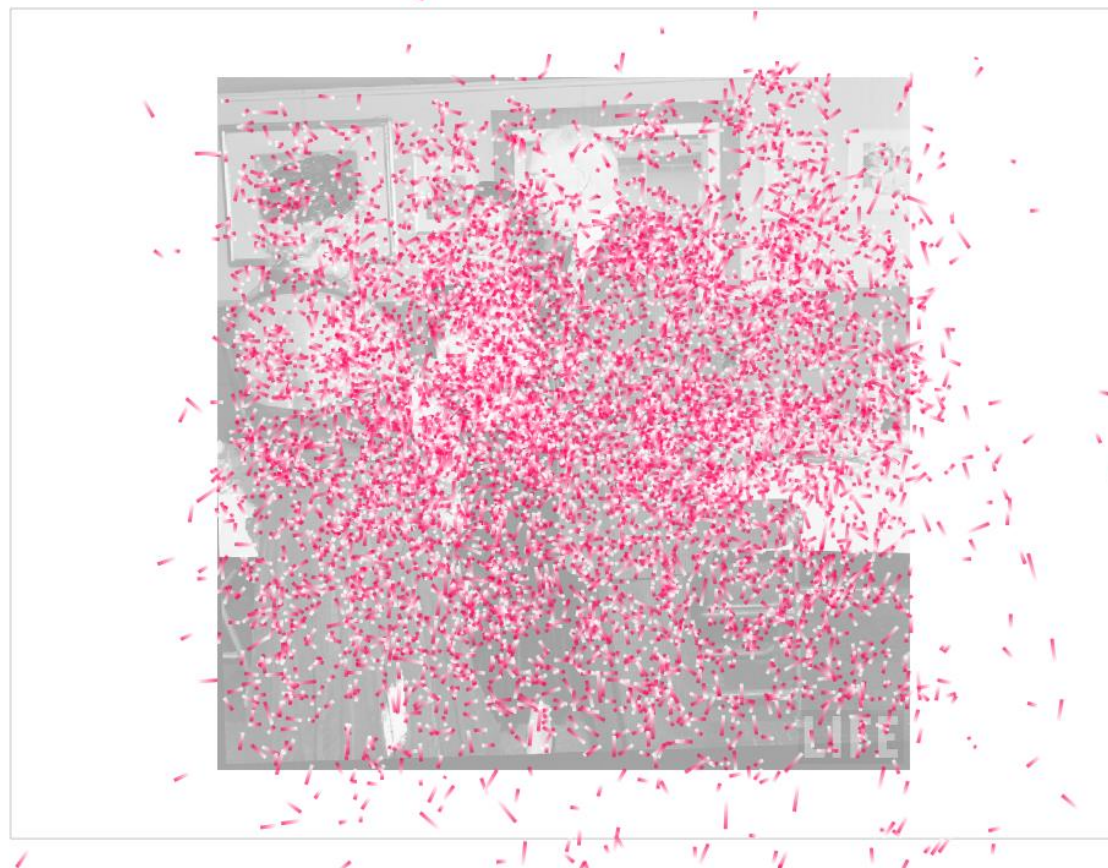
Polar Plot



decade  
memory  
people  
wealth







## Filter

## Data

☐ Trial ☒ Group

## Participants:

- ☒ Ya21-CAC.asc
- ☒ Ya21-JMW.asc
- ☒ Ya21-JNV.asc
- ☒ Ya21-MMK.asc

Check All Uncheck All

## Trials:

- ☒ 0
- ☒ 1
- ☒ 2
- ☒ 3

Check All

## Test Conditions:

- ☒ decade
- ☒ memory
- ☒ people
- ☒ wealth

Check All Uncheck All

Update

## Fixation Detection

☒ Use Fixations from Input File

Relative Velocity Threshold

8,00

Minimum Saccade Duration [ms]

3

Velocity Window Size [samples]

9

☐ Binocular Saccades Only☐ Maximum Saccade Duration [ms]☒ Minimum Saccade Amplitude [°]☐ Maximum Saccade Amplitude [°]☒ Minimum Inter-Saccadic Interval (i.e. Minimum Fixation Time) [ms]☐ Minimum Saccade Peak Velocity [°/s]☐ Maximum Saccade Peak Velocity [°/s]☐ Ignore Time at Start of Data [ms]☐ Ignore Time at End of Data [ms]

Update Fixations for Current Trial

Update Fixations for Current Participant

Update Fixations for all Trials

## Diagrams

Data for Plots

Microsaccades

On y Axis:

Amplitude [°]

Bin size:

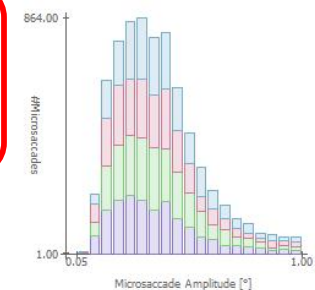
0,050

Max x:

0,00

Max y:

0,00



On x Axis:

Amplitude [°]

On y Axis:

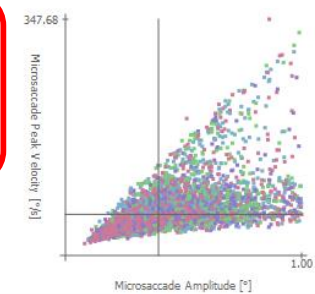
Peak Velocity [°/s]

Max x:

0,00

Max y:

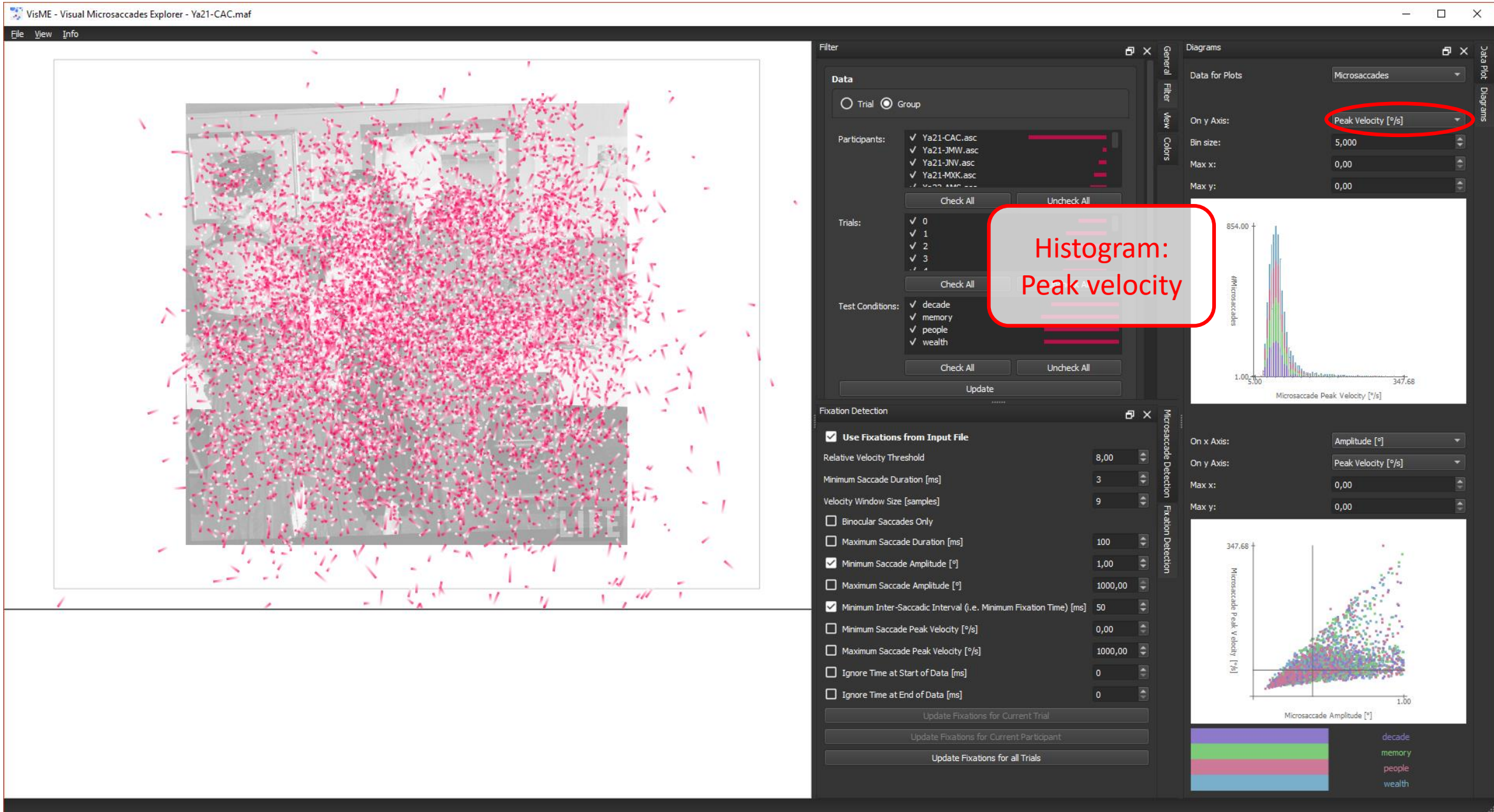
0,00

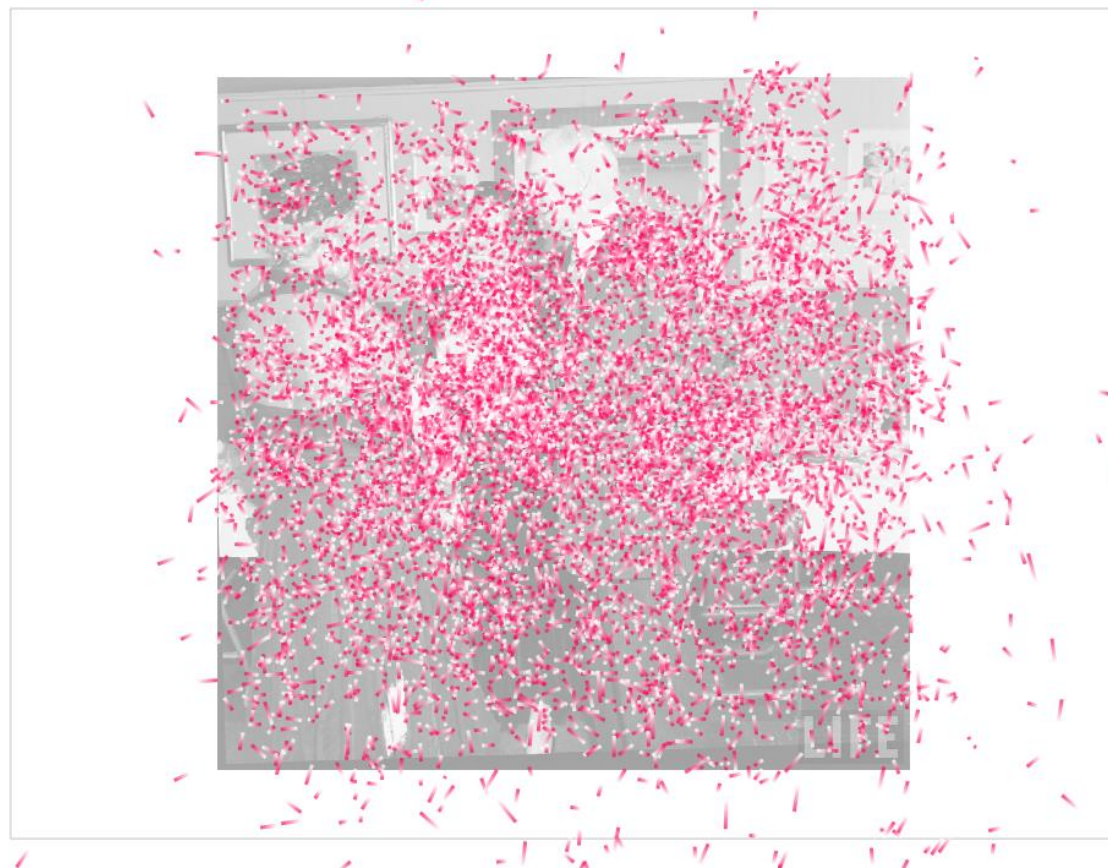


Histogram:  
Amplitude

Scatterplot:  
Amplitude –  
Peak velocity

decade  
memory  
people  
wealth





## Filter

## Data

☐ Trial ☒ Group

## Participants:

☒ Ya21-CAC.asc  
☒ Ya21-JMW.asc  
☒ Ya21-JNV.asc  
☒ Ya21-MMK.asc

Check All

Uncheck All

## Trials:

☒ 0  
☒ 1  
☒ 2  
☒ 3

Check All

## Test Conditions:

☒ decade  
☒ memory  
☒ people  
☒ wealth

Check All

Uncheck All

Histogram:  
Duration

Update

Uncheck All

## Fixation Detection

☒ Use Fixations from Input File

Relative Velocity Threshold

8,00

Minimum Saccade Duration [ms]

3

Velocity Window Size [samples]

9

☐ Binocular Saccades Only☐ Maximum Saccade Duration [ms]

100

☒ Minimum Saccade Amplitude [°]

1,00

☐ Maximum Saccade Amplitude [°]

1000,00

☒ Minimum Inter-Saccadic Interval (i.e. Minimum Fixation Time) [ms]

50

☐ Minimum Saccade Peak Velocity [°/s]

0,00

☐ Maximum Saccade Peak Velocity [°/s]

1000,00

☐ Ignore Time at Start of Data [ms]

0

☐ Ignore Time at End of Data [ms]

0

Update Fixations for Current Trial

Update Fixations for Current Participant

Update Fixations for all Trials

## Diagrams

Data for Plots

Microsaccades

On y Axis:

Duration [ms]

Bin size:

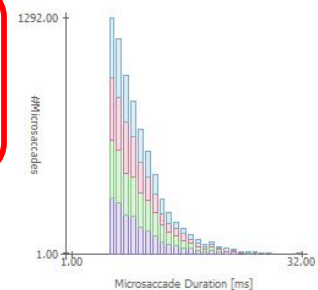
1

Max x:

0,00

Max y:

0,00



On x Axis:

Amplitude [°]

On y Axis:

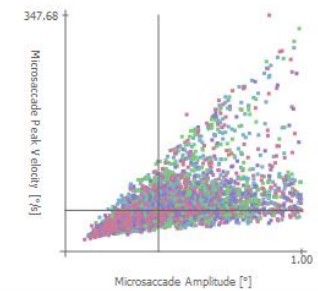
Peak Velocity [°/s]

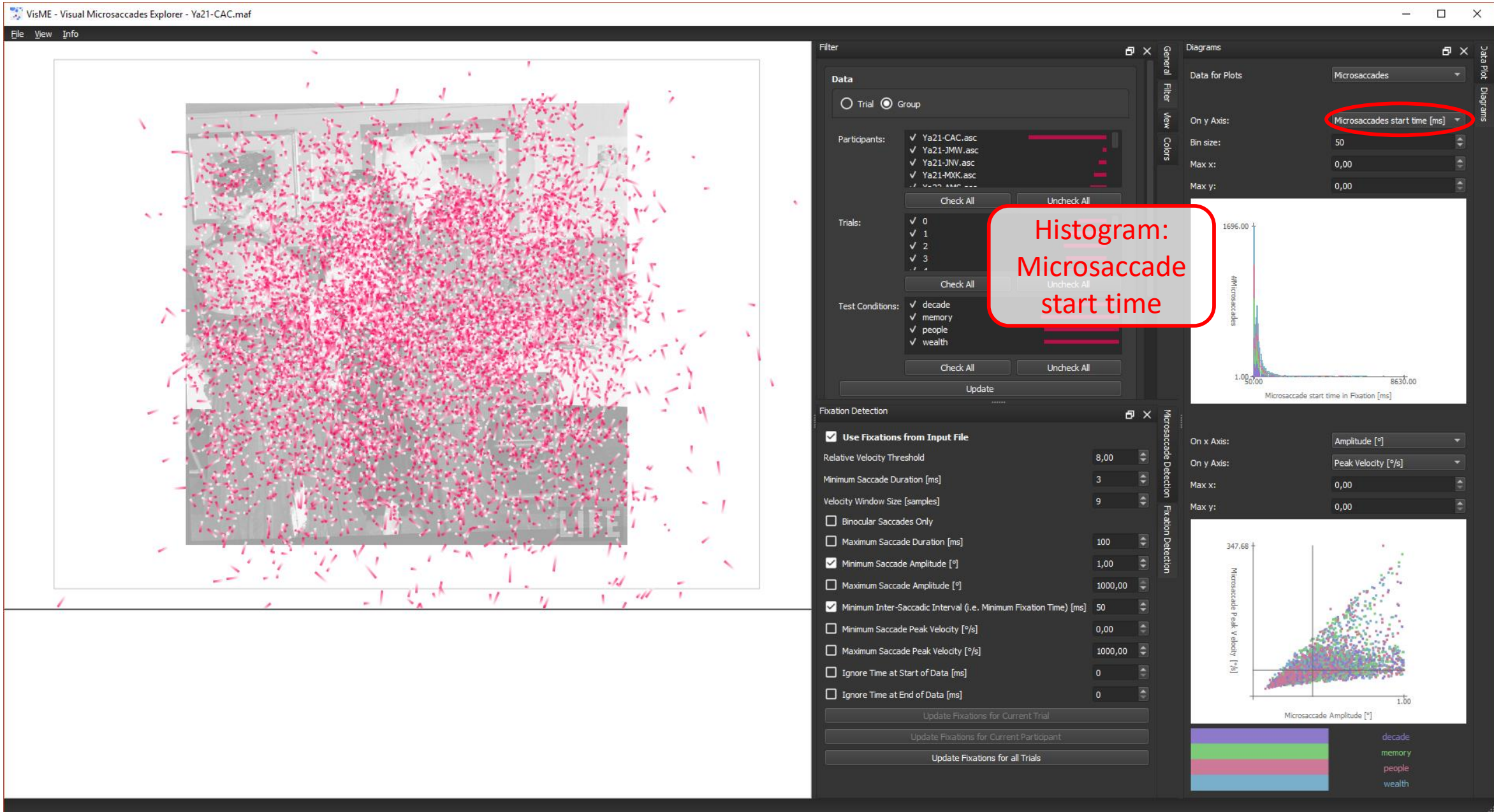
Max x:

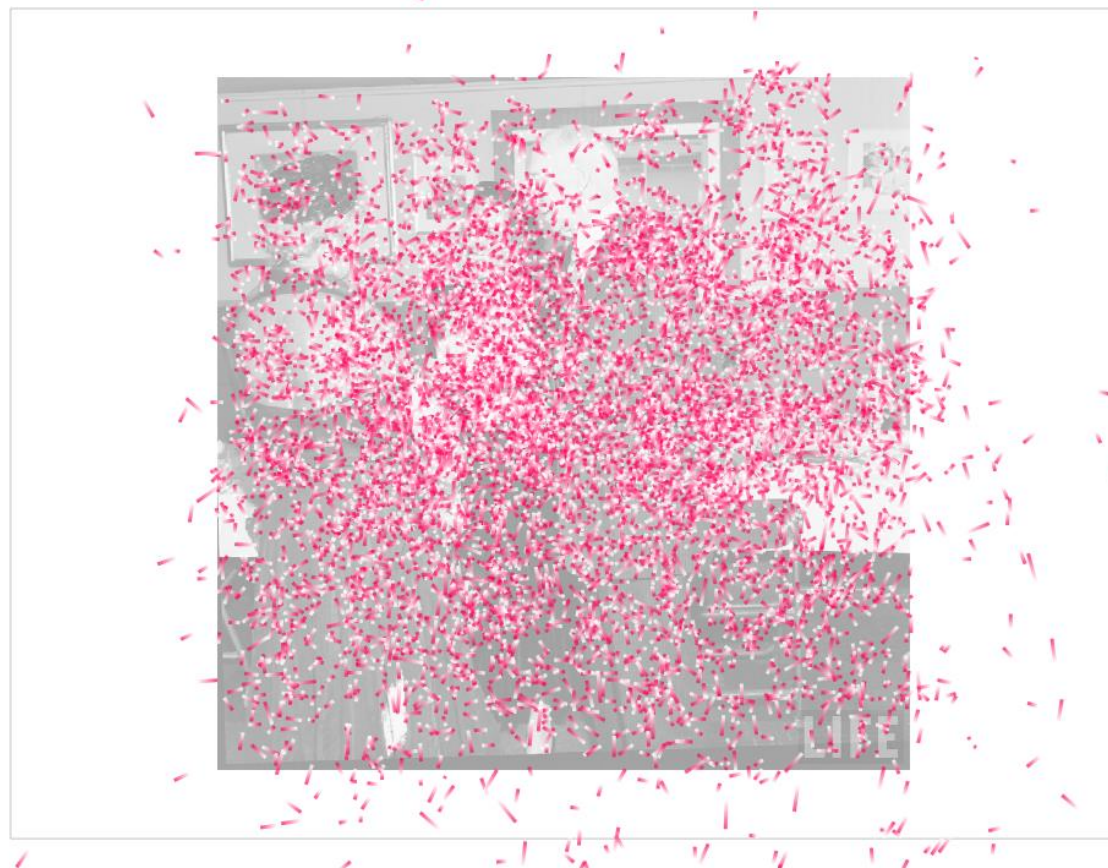
0,00

Max y:

0,00

decade  
memory  
people  
wealth





## Filter

## Data

☐ Trial ☒ Group

## Participants:

☒ Ya21-CAC.asc  
☒ Ya21-JMW.asc  
☒ Ya21-JNV.asc  
☒ Ya21-MMK.asc

Check All Uncheck All

## Trials:

☒ 0  
☒ 1  
☒ 2  
☒ 3

Check All Uncheck All

## Test Conditions:

☒ decade  
☒ memory  
☒ people  
☒ wealth

Check All Uncheck All

Update

## Fixation Detection

☒ Use Fixations from Input File

Relative Velocity Threshold

8,00

Minimum Saccade Duration [ms]

3

Velocity Window Size [samples]

9

☐ Binocular Saccades Only☐ Maximum Saccade Duration [ms]

100

☒ Minimum Saccade Amplitude [°]

1,00

☐ Maximum Saccade Amplitude [°]

1000,00

☒ Minimum Inter-Saccadic Interval (i.e. Minimum Fixation Time) [ms]

50

☐ Minimum Saccade Peak Velocity [°/s]

0,00

☐ Maximum Saccade Peak Velocity [°/s]

1000,00

☐ Ignore Time at Start of Data [ms]

0

☐ Ignore Time at End of Data [ms]

0

Update Fixations for Current Trial

Update Fixations for Current Participant

Update Fixations for all Trials

## Diagrams

Data for Plots

Microsaccades

On y Axis:

Microsaccades start time [ms]

Bin size:

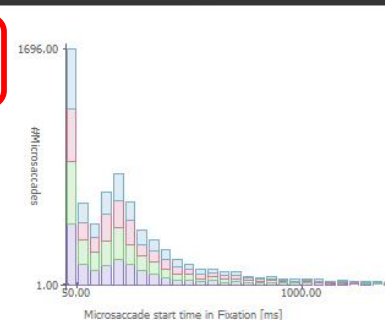
50

Max x:

1000,00

Max y:

0,00



On x Axis:

Amplitude [°]

On y Axis:

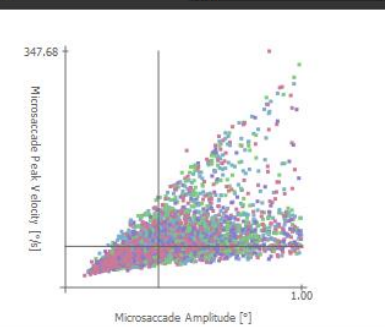
Peak Velocity [°/s]

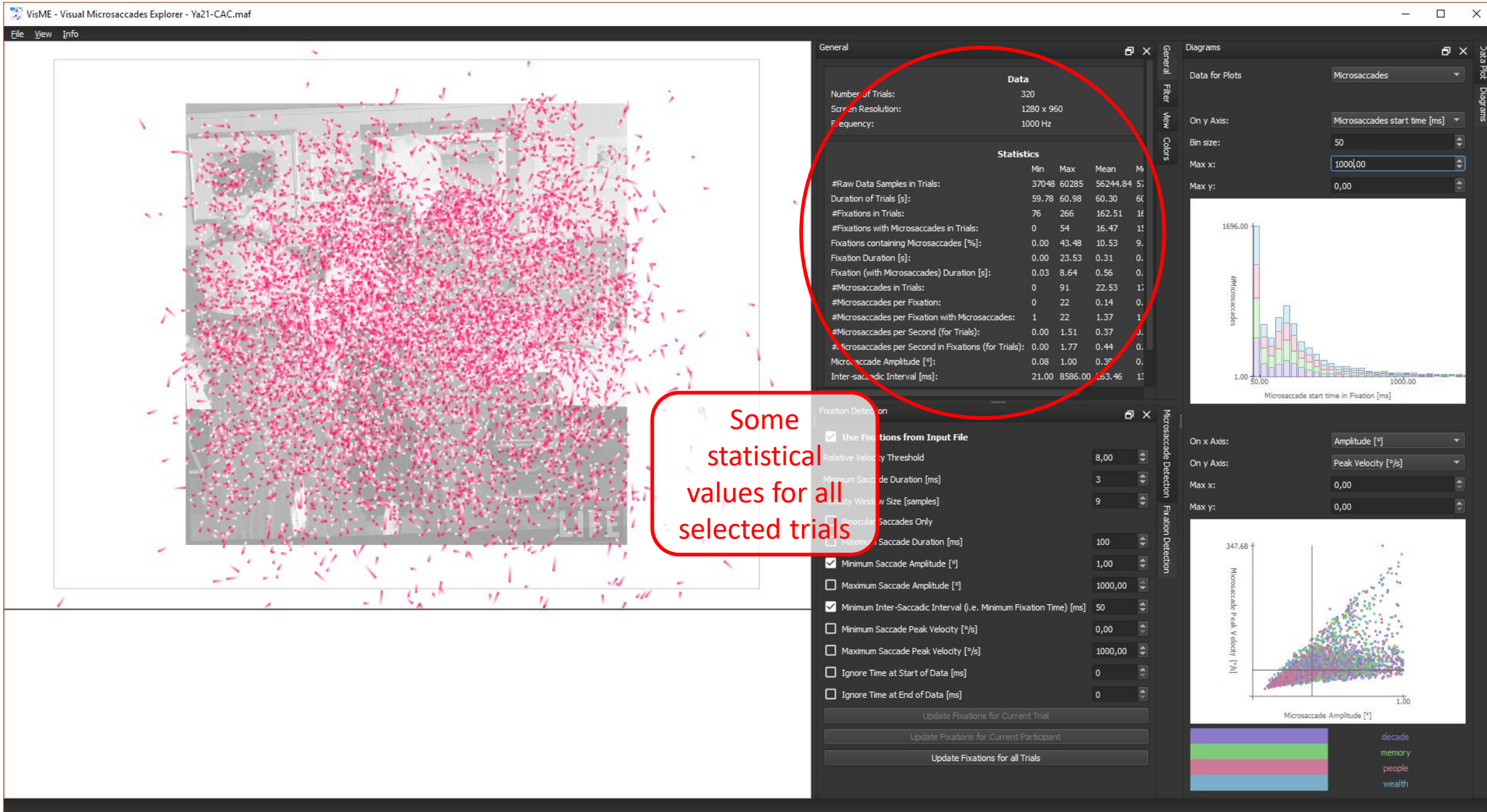
Max x:

0,00

Max y:

0,00

decade  
memory  
people  
wealth





## Filter

## Data

☐ Trial ☒ Group

Participants:

☒ Ya21-CAC.asc☐ Ya21-JNV.asc☐ Ya21-MMK.asc

Trials:

☒ 0☒ 1☒ 2☒ 3☒ 4☒ 5☒ 6☒ 7☒ 8☒ 9☒ 10☒ 11☒ 12☒ 13☒ 14☒ 15☒ 16☒ 17☒ 18☒ 19☒ 20☒ 21☒ 22☒ 23☒ 24☒ 25☒ 26☒ 27☒ 28☒ 29☒ 30☒ 31☒ 32☒ 33☒ 34☒ 35☒ 36☒ 37☒ 38☒ 39

Test Conditions:

☒ decade☒ memory☒ people☒ wealth

## Fixation Detection

☒ Use Fixations from Input File

Relative Velocity Threshold

8,00

Minimum Saccade Duration [ms]

3

Velocity Window Size [samples]

9

☐ Binocular Saccades Only☐ Maximum Saccade Duration [ms]

100

☒ Minimum Saccade Amplitude [°]

1,00

☐ Maximum Saccade Amplitude [°]

1000,00

☒ Minimum Inter-Saccadic Interval (i.e. Minimum Fixation Time) [ms]

50

☐ Minimum Saccade Peak Velocity [°/s]

0,00

☐ Maximum Saccade Peak Velocity [°/s]

1000,00

☐ Ignore Time at Start of Data [ms]

0

☐ Ignore Time at End of Data [ms]

0

Update Fixations for Current Trial

Update Fixations for Current Participant

Update Fixations for all Trials

## Data Plot

Fixations

All

Data Values

Microsaccades

Direction

Screen Coordinate System

Type

Direction Counts

Graph

Rose Plot with Hole

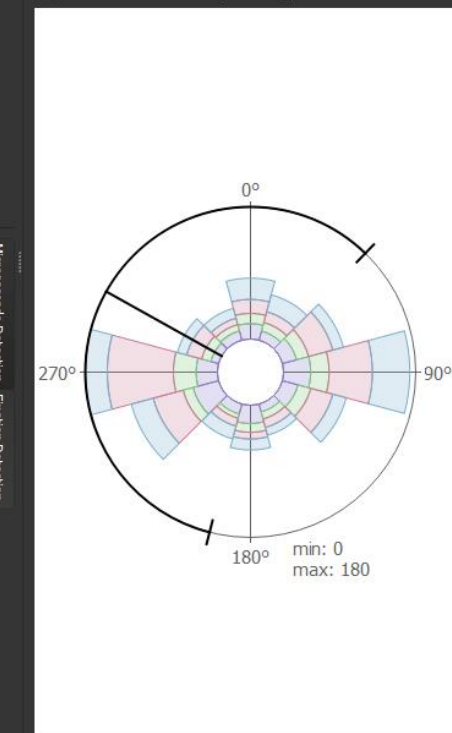
Aggregation bins:

12

plus (count) value:

0,00

Aggregate Test Conditions

☒ Use Test Condition Colors (if Available)decade  
memory  
people  
wealth



## Filter

## Data

☐ Trial ☒ Group

## Participants:

☒ Ya21-CAC.asc  
☒ Ya21-JMW.asc  
☒ Ya21-JNV.asc  
☒ Ya21-MMK.asc

Check All

Uncheck All

## Trials:

☒ 0  
☒ 1  
☒ 2  
☒ 3  
☒ 4

Check All

Uncheck All

## Test Conditions:

☒ decade  
☒ memory  
☒ people  
☒ wealth

Check All

Uncheck All

Update

## Fixation Detection

☒ Use Fixations from Input File

Relative Velocity Threshold

8,00

Minimum Saccade Duration [ms]

3

Velocity Window Size [samples]

9

☐ Binocular Saccades Only☐ Maximum Saccade Duration [ms]

100

☒ Minimum Saccade Amplitude [°]

1,00

☐ Maximum Saccade Amplitude [°]

1000,00

☒ Minimum Inter-Saccadic Interval (i.e. Minimum Fixation Time) [ms]

50

☐ Minimum Saccade Peak Velocity [°/s]

0,00

☐ Maximum Saccade Peak Velocity [°/s]

1000,00

☐ Ignore Time at Start of Data [ms]

0

☐ Ignore Time at End of Data [ms]

0

Update Fixations for Current Trial

Update Fixations for Current Participant

Update Fixations for all Trials

## Data Plot

Fixations

All

Data Values

Microsaccades

Direction

To Next Fixation

Type

Direction Counts

Graph

Rose Plot with Hole

Aggregation Radius

12

Plot Radius (°)

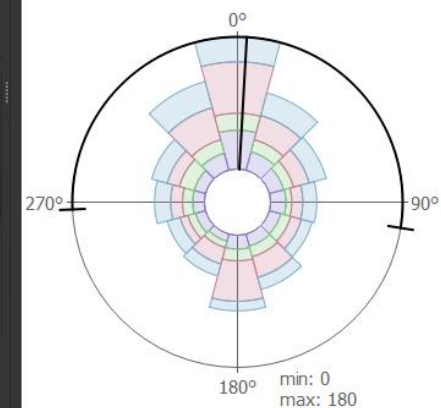
0

Aggregation

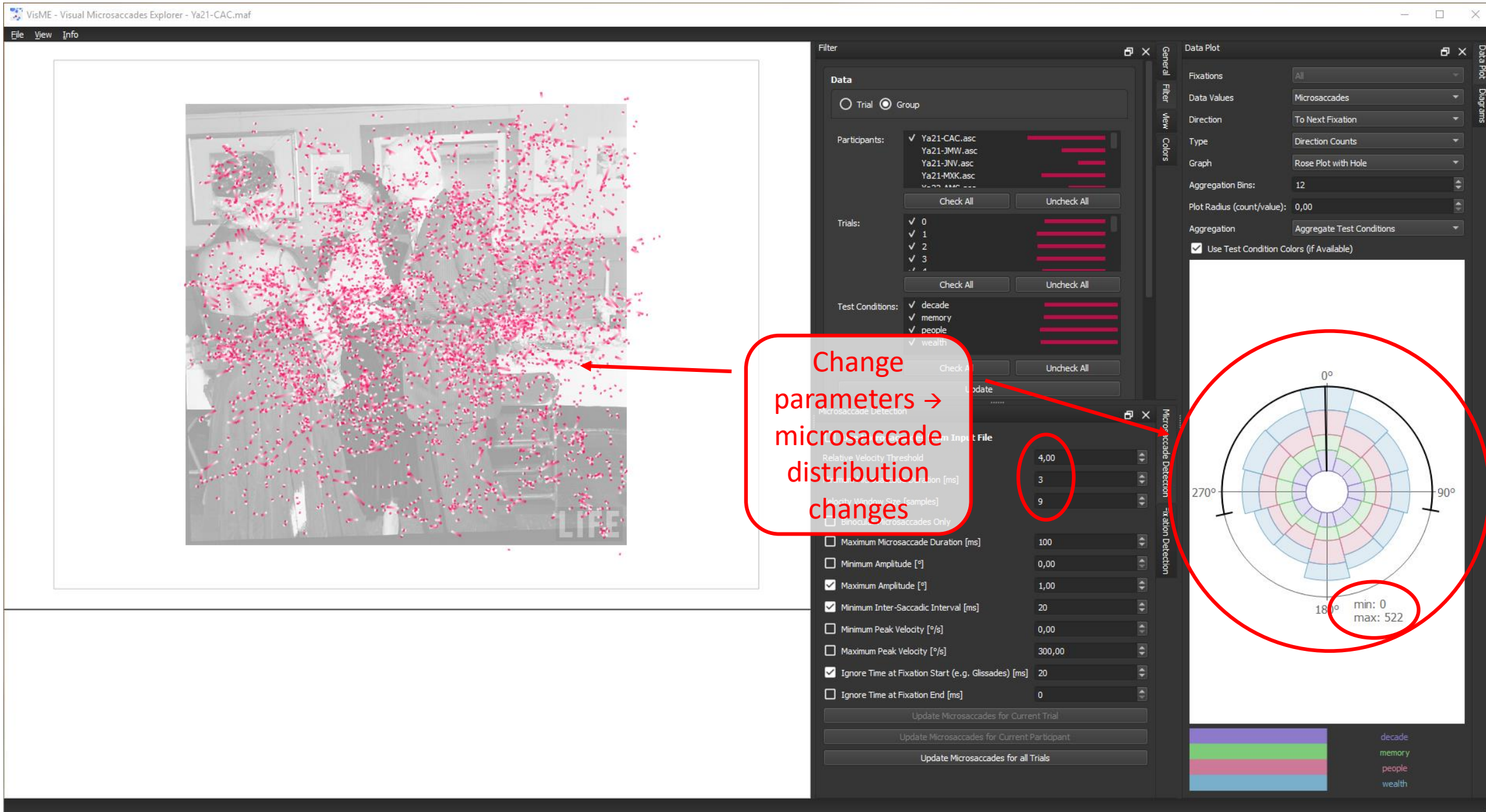
Aggregate Test Conditions

☒ Use Test Conditions

Directional of  
microsaccades  
towards next  
fixation



min: 0  
max: 180



We provide our tool as open  
source software on GitHub:  
<https://github.com/MunzT/VisME>