# ${\bf Statistiques\ fMRI}$

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# Contents

Analyzing betweenness in atlas aal
Analyzing strength in atlas aal
Analyzing smallworldeness in atlas aal
Analyzing betweenness in atlas harvard_oxford
Analyzing strength in atlas harvard_oxford
Analyzing smallworldeness in atlas harvard_oxford
Analyzing betweenness in atlas msdl
Analyzing strength in atlas msdl
Analyzing smallworldeness in atlas msdl

### Analyzing betweenness in atlas aal

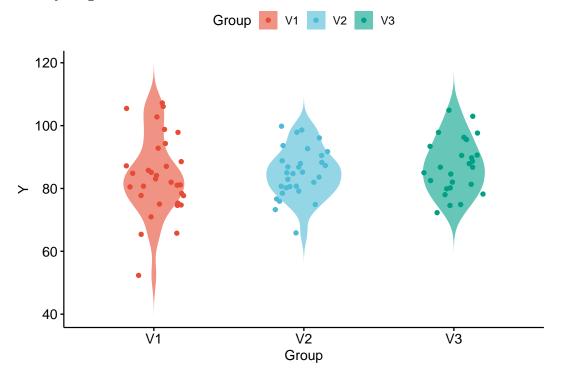


Table 1: Analyzing betweenness ~ Group + (1|id) : Atlas aal

effect	$\operatorname{term}$	estimate	$\operatorname{std.error}$	statistic	p.value
fixed	(Intercept)	4.4141272	0.0258689	170.634829	0.0000000
fixed	GroupV2	0.0278491	0.0209989	1.326218	0.1847675
fixed	GroupV3	0.0323590	0.0222470	1.454534	0.1457983

#### Analyzing strength in atlas aal

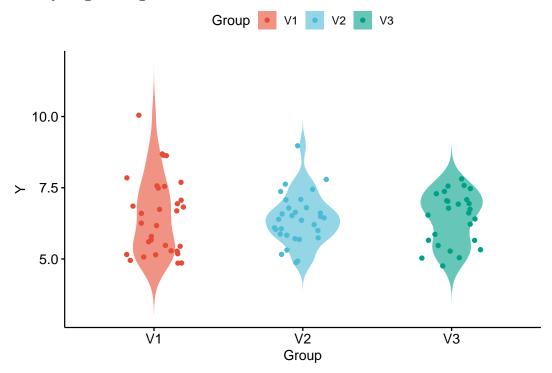


Table 2: Analyzing strength  $\sim$  Group + (1|id) : Atlas aal

effect	term	estimate	std.error	statistic	p.value
fixed	(Intercept) GroupV2 GroupV3	0.0133673	0.0343511 0.0302618 0.0318883	53.8101522 0.4417219 0.4012001	

#### Analyzing smallworldeness in atlas aal

1.57916615189428" [1] "g clust : 0.357304826692582" [1] "g dist : 0.983444950593972" [1] "g clust : 0.294502617801047" [1] "g dist : 0.928309726685798" [1] "g clust : 0.319362950544845" [1] "g dist: 1.4316999525268" [1] "g clust: 0.366054524801212" [1] "g  $\mathrm{dist}: 0.957736634655299" \ [1] \ "g \ \mathrm{clust}: 0.304114873553365" \ [1] \ "g \ \mathrm{dist}: 1.1266164102878"$ [1] "g clust : 0.445366673670939" [1] "g dist : 2.03144851979808" [1] "g clust : 0.343611057413493" [1] "g dist: 1.24932849137288" [1] "g clust: 0.404164749194662" [1] "g dist: 2.0086622500672" [1] "g clust: 0.23382303465291" [1] "g dist: 1.85983474639242" [1] "g clust : 0.296097934200459" [1] "g dist : 1.20884343583311" [1] "g clust :  $0.284303745928339"\ [1]\ \text{``g dist}:\ 1.26124902296058''\ [1]\ \text{``g clust}:\ 0.330230675839741''\ [1]\ \text{``g clust}:\ 0.33023067589741''\ [1]\ \text{``g clust}:\ 0.33023067589741''\ [1]\ \text{``g clust}:\ 0.33023067589741''\ [1]\ \text{``g clust}:\ 0.33023067589741''\ [1]\ \text{``g clust}:\ 0.3302306759741''\ [1]\ \text{``g clust}:\ 0.3$  $\mathrm{dist}: 1.12736530442647" \ [1] \ \text{``g clust}: 0.411222136817832" \ [1] \ \text{``g dist}: 1.3317227170963" \ [1]$ "g clust : 0.230518697225573" [1] "g dist : 0.884166681519727" [1] "g clust : 0.34176" [1] "g dist : 1.00222721580044" [1] "g clust : 0.349514563106796" [1] "g dist : 1.14936607073225" [1] "g  $clust: 0.30788945843548" \ [1] \ "g \ dist: 1.30705591530023" \ [1] \ "g \ clust: 0.30726429675425" \ [1]$ "g dist: 1.11200728523102" [1] "g clust: 0.364485981308411" [1] "g dist: 1.23102354601111"  $[1] \ \ \text{``g clust} \ : \ \ 0.397526501766784 \ \ [1] \ \ \text{``g dist} \ : \ \ 1.18354017096194 \ \ [1] \ \ \text{``g clust} \ : \ \ \\$ 0.575147125396107" [1] "g dist: 1.33430683470522" [1] "g clust: 0.289881494986326" [1] "g  $\mathrm{dist}: 1.29160532992971" \ [1] \ "g \ \mathrm{clust}: 0.32712215320911" \ [1] \ "g \ \mathrm{dist}: 1.11662852160029"$ [1] "g clust : 0.309692442029689" [1] "g dist : 0.946129615600068" [1] "g clust : 0.423875278396437" [1] "g dist: 1.74414582331867" [1] "g clust: 0.350923752169031" [1] "g  ${\rm dist}: 0.958058047353948" \ [1] \ {\rm ``g\ clust}: 0.371301939058172" \ [1] \ {\rm ``g\ dist}: 1.04883769563613"$ [1] "g clust : 0.301957682420407" [1] "g dist : 1.41237945464801" [1] "g clust : 0.349044349601039" [1] "g dist : 1.19594417821874" [1] "g clust : 0.30341672344982" [1] "g  $\mathrm{dist}: 1.0227011893638" \ [1] \ \text{"g clust}: 0.45870049385107" \ [1] \ \text{"g dist}: 1.50141295716601"$ [1] "g clust : 0.343141317861583" [1] "g dist : 1.30486803343618" [1] "g clust :  $0.533161764705882"\ [1]\ \text{``g dist}:\ 1.19265383200877''\ [1]\ \text{``g clust}:\ 0.37059708981435''\ [1]\ \text{``g}$  $dist: 1.11891316138322" \ [1] \ "g \ clust: 0.300471327572663" \ [1] \ "g \ dist: 1.09960646263304"$ [1] "g clust : 0.407656590542974" [1] "g dist : 1.29833898713939" [1] "g clust : 0.316163028282611" [1] "g dist: 1.08624556039253" [1] "g clust: 0.378192005171856" [1] "g dist: 1.41113440141063" [1] "g clust: 0.46176812074971" [1] "g dist: 1.3915494534662" [1] "g clust : 0.370834240906121" [1] "g dist : 1.65241019655721" [1] "g clust : 0.349921376375913" [1] "g dist: 1.16689174643549" [1] "g clust: 0.465057975556252" [1] "g  $\mathrm{dist}:\, 1.61556687800477"\; [1]\; \mathrm{``g\; clust}:\, 0.313600727190092"\; [1]\; \mathrm{``g\; dist}:\, 1.259597155499"\; [1]$ "g clust : 0.352466367713004" [1] "g dist : 1.45520829538727" [1] "g clust : 0.314600948649206" [1] "g dist : 1.20793189733277" [1] "g clust : 0.418911637931034" [1] "g dist : 0.9770381470863" [1] "g clust : 0.293346052945385" [1] "g dist : 1.09517113140391" [1] "g clust : 0.404790200201115" [1] "g dist: 1.69446872441303" [1] "g clust: 0.402301857180225" [1] "g  ${\rm dist}: 1.30840519668425" \ [1] \ "g \ {\rm clust}: 0.364541179044077" \ [1] \ "g \ {\rm dist}: 1.38977646966044"$ [1] "g clust : 0.350948360925337" [1] "g dist : 1.20545160967146" [1] "g clust : 0.306639839034205" [1] "g dist: 1.4190317185996" [1] "g clust: 0.45550193050193" [1] "g  $\mathrm{dist}: 1.41517459397132" \ [1] \ "g \ \mathrm{clust}: 0.507904981329944" \ [1] \ "g \ \mathrm{dist}: 1.36157405217685"$ [1] "g clust : 0.377202588352414" [1] "g dist : 0.947780950131912" [1] "g clust :  $0.438423236514523" \ [1] \ \text{``g dist} : \ 1.62454968901504" \ [1] \ \text{``g clust} : \ 0.28648765699437"$ [1] "g dist : 0.954022794425035" [1] "g clust : 0.327476195150682" [1] "g dist : 0.960101295531064" [1] "g clust : 0.318908748824083" [1] "g dist : 1.06638936101106" [1] "g clust : 0.378081432924014" [1] "g dist : 1.37962925178664" [1] "g clust : 0.397618633756301" [1] "g dist: 1.29803872455544" [1] "g clust: 0.33890214797136" [1] "g  $\mathrm{dist}: 0.845896164667287" \ [1] \ \text{``g clust}: 0.325373448348412" \ [1] \ \text{``g dist}: 1.10466105748551"$ [1] "g clust : 0.393724159864306" [1] "g dist : 1.56002042612284" [1] "g clust :

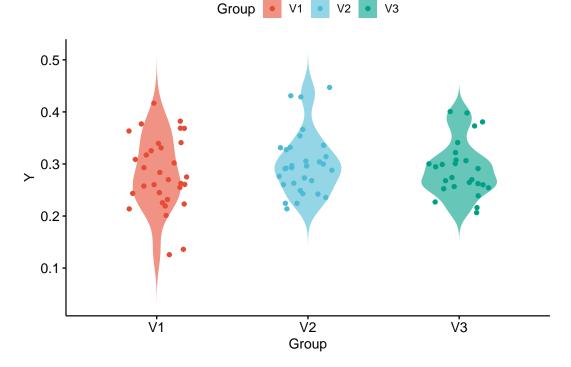


Table 3: Analyzing smallworldeness  $\sim$  Group + (1|id) : Atlas aal

effect	term	estimate	std.error	statistic	p.value
fixed	(Intercept)	-1.2752599	0.0438174	-29.1039846	0.0000000
fixed	GroupV2	0.0519292	0.0418382	1.2411913	0.2145351
fixed	GroupV3	0.0397753	0.0442809	0.8982495	0.3690526

### Analyzing betweenness in atlas harvard\_oxford

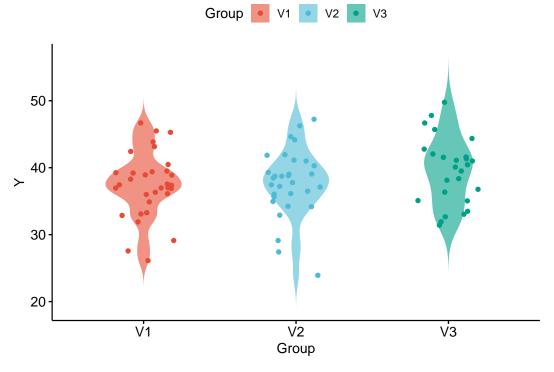


Table 4: Analyzing betweenness ~ Group + (1|id) : Atlas harvard\_oxford

effect	term	estimate	std.error	statistic	p.value
fixed	(Intercept)	3.6204992	0.0268993	134.5946539	0.0000000
fixed	GroupV2	0.0076445	0.0270764	0.2823322	0.7776888
fixed	GroupV3	0.0490388	0.0286261	1.7130810	0.0866976

### Analyzing strength in atlas harvard\_oxford

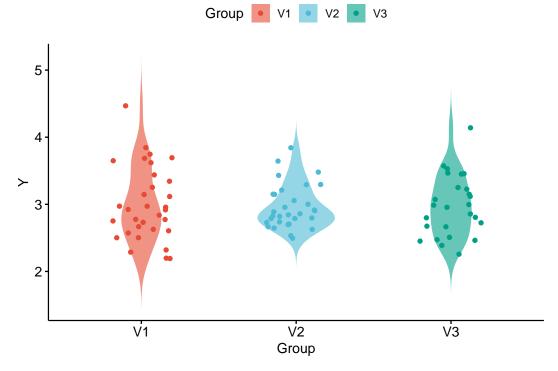


Table 5: Analyzing strength  $\sim$  Group + (1|id) : Atlas harvard oxford

effect	term	estimate	std.error	statistic	p.value
fixed	(Intercept)	1.0818730	0.0303173	35.6849627	0.0000000
fixed	GroupV2	0.0075657	0.0288634	0.2621219	0.7932275
fixed	GroupV3	0.0033236	0.0303586	0.1094773	0.9128239

### Analyzing smallworldeness in atlas harvard\_oxford

[1] "g clust : 0.312862108922364" [1] "g dist : 2.01763638313385" [1] "g clust : 0.216393442622951" [1] "g dist: 1.40252807348724" [1] "g clust: 0.167630057803468" [1] "g dist: 1.27129294878043" [1] "g clust: 0.155258764607679" [1] "g dist: 1.83824350828134" [1] "g clust : 0.201526717557252" [1] "g dist : 1.51584649023694" [1] "g clust : 0.161849710982659" [1] "g dist: 1.39032822281423" [1] "g clust: 0.215867158671587" [1] "g  ${\rm dist}: 2.08805414126993" \ [1] \ {\rm ``g\ clust}: 0.271954674220963" \ [1] \ {\rm ``g\ dist}: 1.63930479074136"$ [1] "g clust : 0.169260700389105" [1] "g dist : 2.21653773398791" [1] "g clust : 0.200392927308448" [1] "g dist: 2.1960493822433" [1] "g clust: 0.205287713841369" [1] "g  ${\rm dist}: 1.61333927350451" \ [1] \ "g \ {\rm clust}: 0.184534270650264" \ [1] \ "g \ {\rm dist}: 1.53607304454102"$ [1] "g clust : 0.185741088180113" [1] "g dist : 1.53074929382821" [1] "g clust : 0.195205479452055" [1] "g dist: 1.56712442788139" [1] "g clust: 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clust}: 0.139830508474576" \ [1] \ \text{``g dist}: 1.70687832628876" \ [1] \ \text{``g clust}: 0.240837696335079" \ [1] \ \text{``g dist}: 1.96308019484336" \ [1] \ \text{``g clust}: 0.151119402985075" \ [1] \ \text{``g dist}: 1.46449254106644" \ [1] \ \text{``g clust}: 0.188848920863309" \ [1] \ \text{``g dist}: 1.63734572273522" \ [1] \ \text{``g clust}: 0.214285714285714" \ [1] \ \text{``g dist}: 1.4610345428956" \end{array}$ 

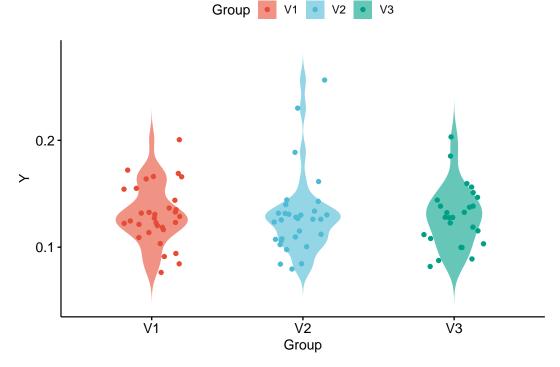


Table 6: Analyzing smallworldeness ~ Group + (1|id) : Atlas harvard oxford

effect	term	estimate	std.error	statistic	p.value
fixed	(Intercept)	-2.0387336	0.0475288	-42.8947334	0.0000000
fixed	GroupV2	-0.0258879	0.0475484	-0.5444540	0.5861291
fixed	GroupV3	-0.0103334	0.0499743	-0.2067754	0.8361853

### Analyzing betweenness in atlas msdl

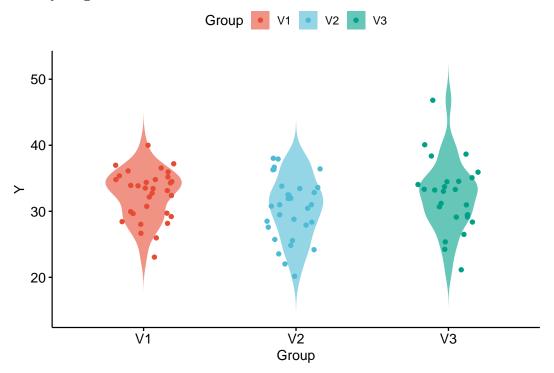


Table 7: Analyzing betweenness ~ Group + (1|id) : Atlas msdl

effect	term	estimate	std.error	statistic	p.value
	(Intercept)	3.4784797		114.2264100	
fixed	GroupV2	-0.0749088	0.0271421	-2.7598760	0.0057823
fixed	GroupV3	-0.0101070	0.0287148	-0.3519795	0.7248536

#### Analyzing strength in atlas msdl

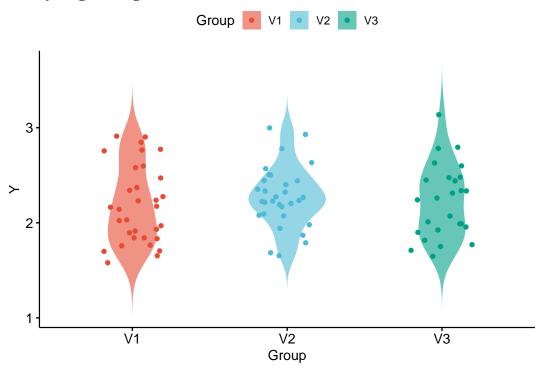


Table 8: Analyzing strength  $\sim$  Group + (1|id) : Atlas msdl

effect	term	estimate	std.error	statistic	p.value
	(Intercept) GroupV2	$\begin{array}{c} 0.7573708 \\ 0.0675715 \end{array}$		$21.202590 \\ 2.277099$	0.0000000 $0.0227803$
fixed	GroupV3	0.0343184	0.0312985	1.096488	0.2728651

#### Analyzing smallworldeness in atlas msdl

dist: 1.15663198119255" [1] "g clust: 0.170658682634731" [1] "g dist: 1.81444739283151" [1] "g clust : 0.1854545454545454545" [1] "g dist : 1.38632122776496" [1] "g clust : 0.186131386861314" [1] "g dist: 1.32618276244963" [1] "g clust: 0.09090909090909090" [1]"g dist: 2.04731373568271" [1] "g clust: 0.236301369863014" [1] "g dist: 1.67405113778987" [1] "g clust : 0.0979591836734694" [1] "g dist : 2.02594261439412" [1] "g clust : 0.231543624161074" [1] "g dist: 2.03865122610632" [1] "g clust: 0.117647058823529" [1] "g dist: 1.39067297901896" [1] "g clust: 0.138297872340426" [1] "g dist: 1.5898740744709" [1] "g clust : 0.0869565217391304" [1] "g dist : 1.48461039167224" [1] "g clust : 0.157894736842105" [1] "g dist: 1.53345371122645" [1] "g clust: 0.222972972972973" [1] "g dist: 1.42576713604898" [1] "g clust: 0.196551724137931" [1] "g dist: 1.25529730331388" [1] "g clust : 0.137404580152672" [1] "g dist : 1.4926732942776" [1] "g clust : 0.236619718309859"  $[1] \ \text{``g dist :} \ 1.66435097177509" \ [1] \ \text{``g clust :} \ 0.274390243902439" \ [1] \ \text{``g dist :} \ \\$ 1.50320879619814" [1] "g clust : 0.26865671641791" [1] "g dist : 1.31221582922447" [1] "g clust : 0.188811188811189" [1] "g dist : 1.42583206545431" [1] "g clust : 0.360576923076923" [1] "g dist: 1.54702604416495" [1] "g clust: 0.192307692307692" [1] "g  ${\rm dist}: 1.45980502830304" \ [1] \ {\rm ``g\ clust}: 0.307453416149068" \ [1] \ {\rm ``g\ dist}: 1.61110418287705"$ [1] "g clust : 0.4166666666666667" [1] "g dist : 1.66623212936366" [1] "g clust : 0.139285714285714" [1] "g dist : 1.976372429958" [1] "g clust : 0.247058823529412" [1] "g  ${\rm dist}: 1.23454161816826" \ [1] \ "g \ {\rm clust}: 0.110367892976589" \ [1] \ "g \ {\rm dist}: 1.14069727543122"$ [1] "g clust : 0.145631067961165" [1] "g dist : 1.52916557093467" [1] "g clust : 0.206521739130435" [1] "g dist: 1.67386728000195" [1] "g clust: 0.247311827956989" [1] "g  ${\rm dist}: 1.21402373592715" \ [1] \ "g \ {\rm clust}: 0.19047619047619" \ [1] \ "g \ {\rm dist}: 1.50098878263854"$ [1] "g clust : 0.114503816793893" [1] "g dist : 1.63133720161706" [1] "g clust : 0.260450160771704" [1] "g dist: 1.28586936813317" [1] "g clust: 0.177570093457944" [1] "g dist: 1.29747303089553" [1] "g clust: 0.183870967741935" [1] "g dist: 1.22064198060333" [1] "g clust : 0.0885608856088561" [1] "g dist : 1.27732167435746" [1] "g clust : 0.0981818181818182" [1] "g dist: 1.59364521661016" [1] "g clust: 0.136882129277567" [1] "g  ${\rm dist}: 1.5871633298798" \ [1] \ "g \ {\rm clust}: 0.296819787985866" \ [1] \ "g \ {\rm dist}: 1.91255701445579" \ [1]$ "g clust : 0.131386861313869" [1] "g dist : 1.93342878361726" [1] "g clust : 0.155339805825243" [1] "g dist : 1.28894199482365" [1] "g clust : 0.15" [1] "g dist : 2.00225151438473" [1] "g clust : 0.0895522388059701" [1] "g dist : 1.54415528580179" [1] "g clust : 0.0964285714285714" [1] "g dist : 1.7532404200815" [1] "g clust : 0.193220338983051" [1] "g dist : 1.52453032105201" [1] "g clust : 0.231543624161074" [1] "g dist : 1.36273013726698" [1] "g clust : 0.113636363636364" [1] "g dist: 1.4389517169018" [1] "g clust: 0.112244897959184" [1] "g  ${\rm dist}: 1.72769683505672" \ [1] \ "g \ {\rm clust}: 0.36568848758465" \ [1] \ "g \ {\rm dist}: 1.79532982051893"$ [1] "g clust : 0.149006622516556" [1] "g dist : 1.50446605378335" [1] "g clust :  $0.0882352941176471"\ [1]\ \text{``g dist}:\ 1.28652111530082''\ [1]\ \text{``g clust}:\ 0.178807947019868''\ [1]$ "g dist: 1.72610767249032" [1] "g clust: 0.171428571428571" [1] "g dist: 1.55911915616235" [1] "g clust : 0.223214285714286" [1] "g dist : 1.67643890591747" [1] "g clust : 0.210702341137124" [1] "g dist: 1.30223899080819" [1] "g clust: 0.186335403726708" [1] "g dist : 1.54007059347376" [1] "g clust : 0.188235294117647" [1] "g dist : 1.24059867872975" [1] "g clust: 0.28391167192429" [1] "g dist: 1.23840836116322" [1] "g  ${\rm clust}: 0.1284046692607" \ [1] \ "g \ {\rm dist}: 1.46492697236139" \ [1] \ "g \ {\rm clust}: 0.203389830508475" \ [1]$ "g dist: 1.80954886633633" [1] "g clust: 0.227848101265823" [1] "g dist: 1.71509641679145" [1] "g clust : 0.127450980392157" [1] "g dist : 1.10985721617907" [1] "g clust : 0.0769230769230769" [1] "g dist: 1.558026125504" [1] "g clust: 0.10188679245283" [1] "g  $\mathrm{dist}: 2.31042605165315" \ [1] \ \text{``g clust}: 0.18595041322314" \ [1] \ \text{``g dist}: 1.73765774971644" \ [1]$ 

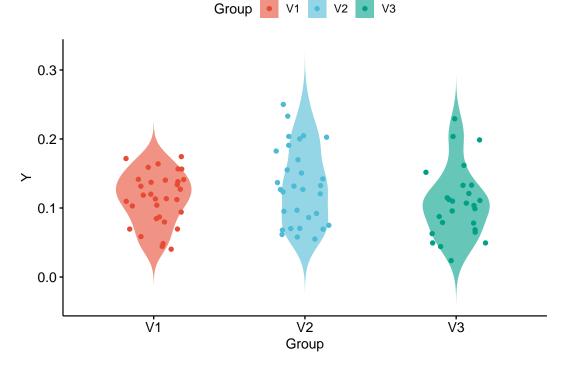


Table 9: Analyzing smallworldeness  $\sim$  Group + (1|id) : Atlas msdl

effect	term	estimate	std.error	statistic	p.value
fixed	(Intercept)	-2.2305345	0.0891692	-25.0146335	0.0000000
fixed	GroupV2	0.1030327	0.0772474	1.3338022	0.1822687
fixed	GroupV3	-0.0769178	0.0821250	-0.9365946	0.3489671