Supplementary Material 5: Comparison of distributions of d_1 , d_2 and d_3 against Venn diagrams generated from various distributions

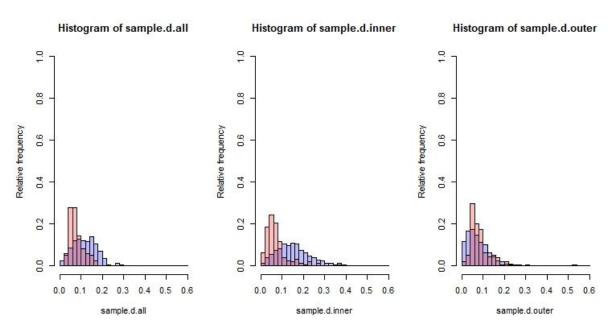


Figure S5.1: Histograms of d_1 , d_2 and d_3 (left to right, respectively) for our data (in red) and for randomly generated Venn diagrams (in purple) from independent uniform distributions.

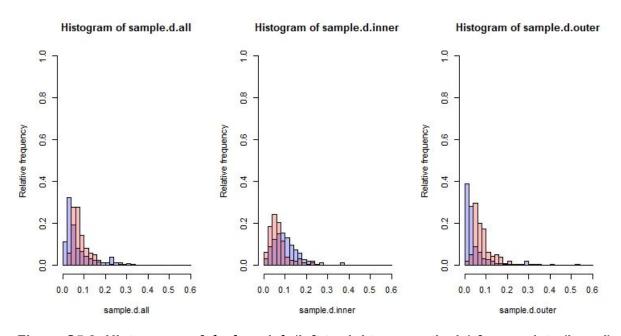


Figure S5.2: Histograms of $d_{\scriptscriptstyle 1}$, $d_{\scriptscriptstyle 2}$ and $d_{\scriptscriptstyle 3}$ (left to right, respectively) for our data (in red)

and for randomly generated Venn diagrams (in purple) from multivariate skew Cauchy distribution¹.

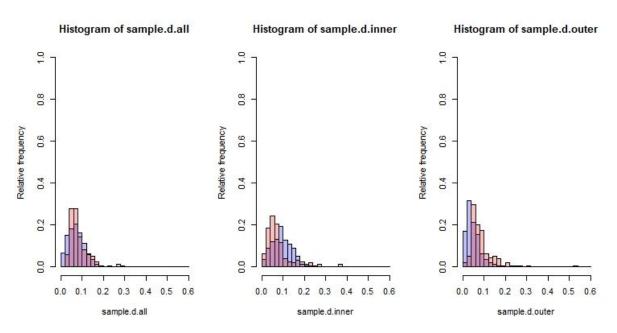


Figure S5.3: Histograms of d_1 , d_2 and d_3 (left to right, respectively) for our data (in red) and for randomly generated Venn diagrams (in purple) from multivariate skew normal distribution².

 $^{^1}$ Parameters estimated from data. Values were generated using the ${\tt mscFit}$ command in R package ${\tt fMultivar}$.

 $^{^2}$ parameters estimated from data. Values were generated using the ${\tt msnFit}$ command in R package ${\tt fMultivar}$.