Proc Univariate *does what??*

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The Question

- A representation of the distribution of some data
- Histogram? Distribution Function?

The Answer

Proc Univariate !?

But.. But... But...

log(X) 9

The UNIVARIATE Procedure
Variable: logx
c1 = 1
c2 = 100

Moments

N	391	Sum Weights	391
Mean	0.92748422	Sum Observations	362.646331
Std Deviation	0.275479	Variance	0.07588868
Skewness	1.18924915	Kurtosis	1.78135738
Uncorrected SS	365.945337	Corrected SS	29.5965856
Coeff Variation	29.7017454	Std Error Mean	0.01393157

Basic Statistical Measures

Location		Variability	
Mean	0.927484	Std Deviation	0.27548
Median	0.832909	Variance	0.07589
Mode	0.788457	Range	1.96210
		Interquartile Range	0.27350

Tests for Location: Mu0=0

Test	-Statistic-		-----p Value------
Student's t	t 66.57427	Pr > |t|	<.0001
Sign	M 195.5	Pr >= |M|	<.0001
Signed Rank	S 38318	Pr >= |S|	<.0001

Quantiles (Definition 5)

Quantile	Estimate
100% Max	2.0108950
99%	1.7457155
95%	1.4906544
90%	1.3787661
75% Q3	1.0296194
50% Median	0.8329091
25% Q1	0.7561220
10%	0.6830968
5%	0.6523252
1%	0.5128236
0% Min	0.0487902

log(X) 10

The UNIVARIATE Procedure
Variable: logx
c1 = 1
c2 = 100

Extreme Observations

-------Lowest------		-----Highest-----	
Value	Obs	Value	Obs
0.0487902	1	1.74572	387
0.0676586	2	1.74572	388
0.4510756	3	1.85160	389
0.5128236	4	1.94018	390
0.5306283	5	2.01089	391

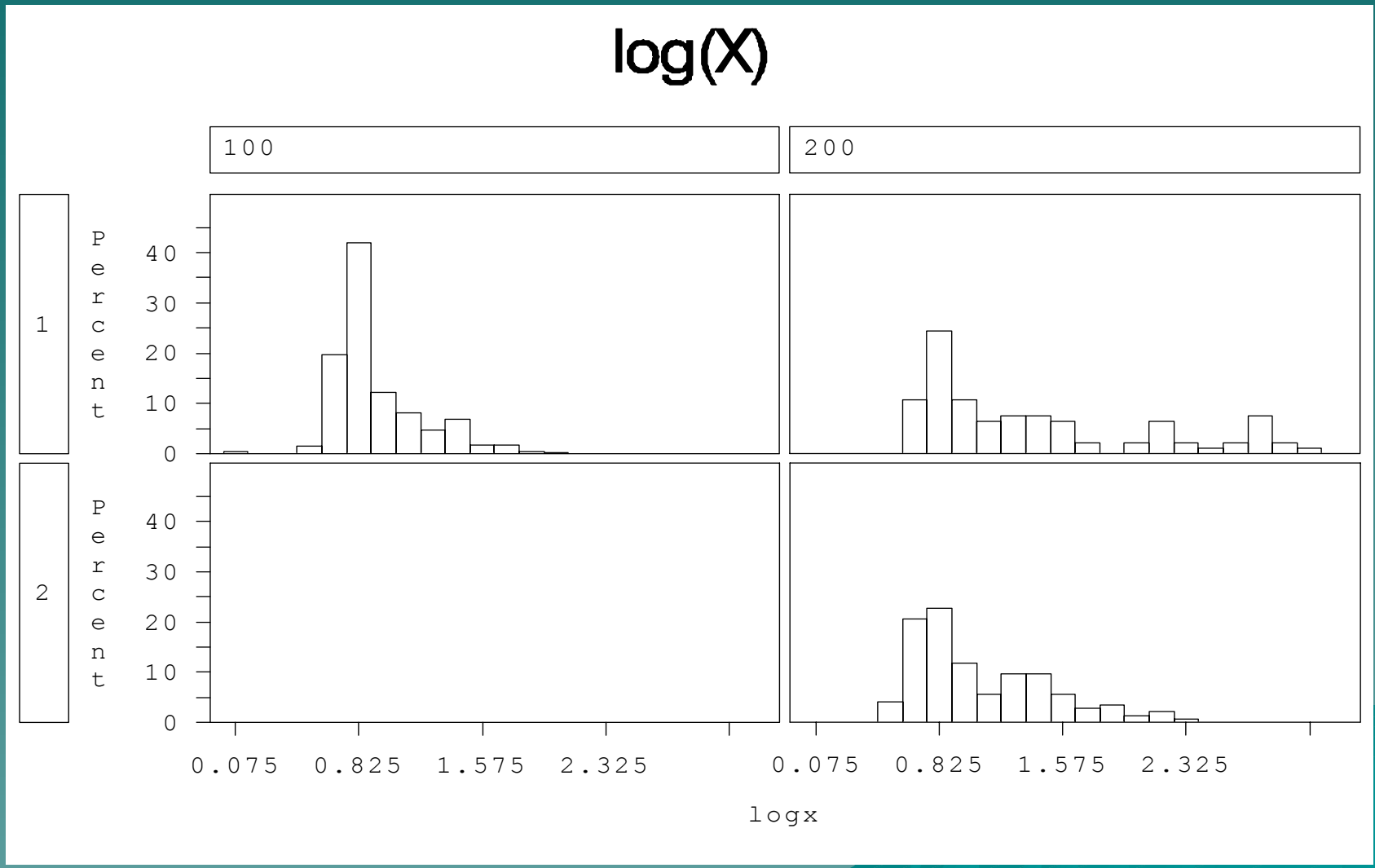
SAS Code

```
Proc Univariate Data=d1smooth;
   Class c1 c2;
   Var logx;
   Histogram logx ;
run;
```

SAS Code

```
ods rtf file="t:\presentation.rtf";
Proc Univariate Data=d1smooth;
   Class c1 c2;
   Var logx;
   Histogram logx ;
run;
ods rtf close;
```

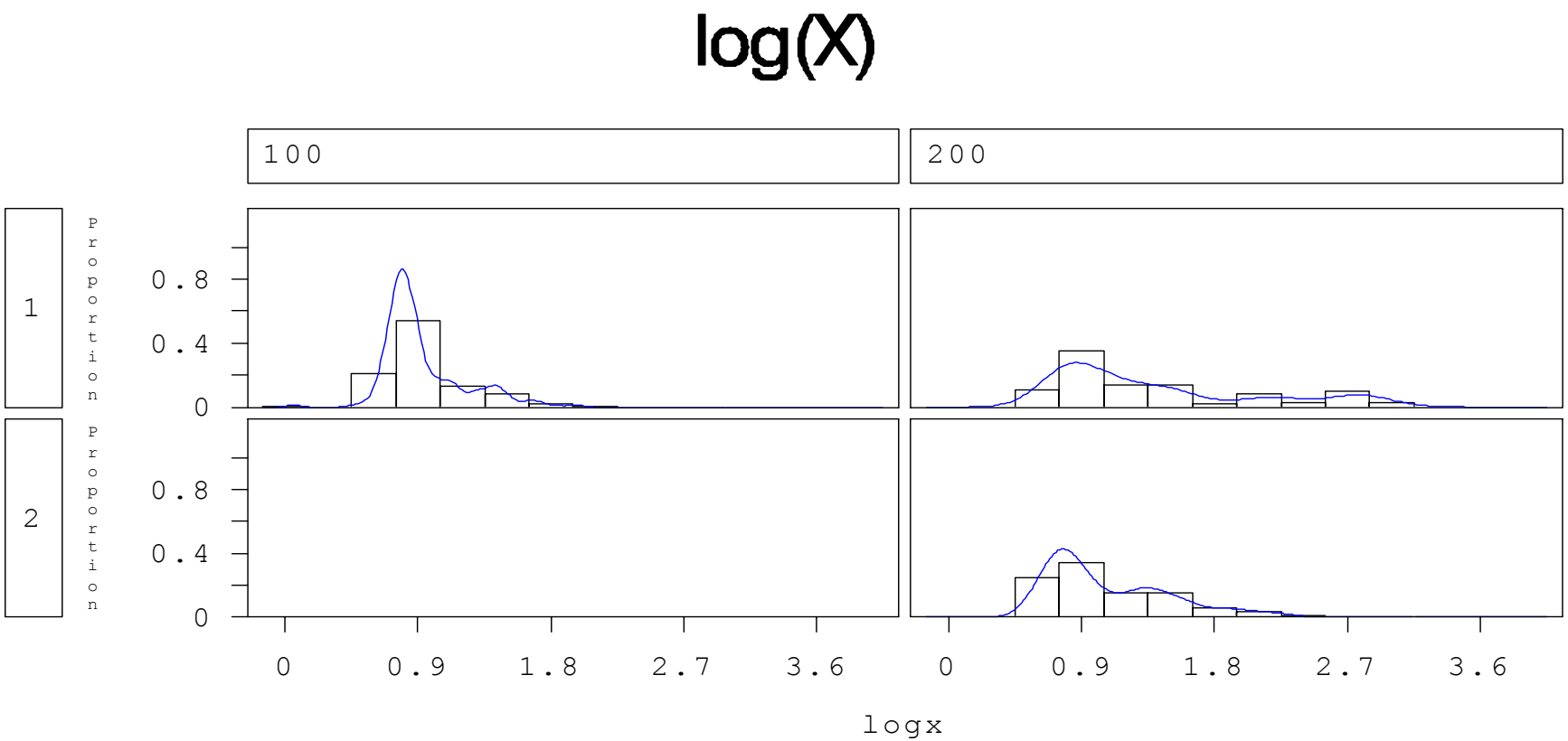
Pretty Nice Histograms



SAS Code

```
ods rtf file="t:\presentation.rtf";
Proc Univariate Data=d1smooth;
   Class c1 c2;
   Var logx;
   Histogram logx /
                  kernel(c=.5 k=normal)
                  vscale=proportion
                  ;
run;
ods rtf close;
```

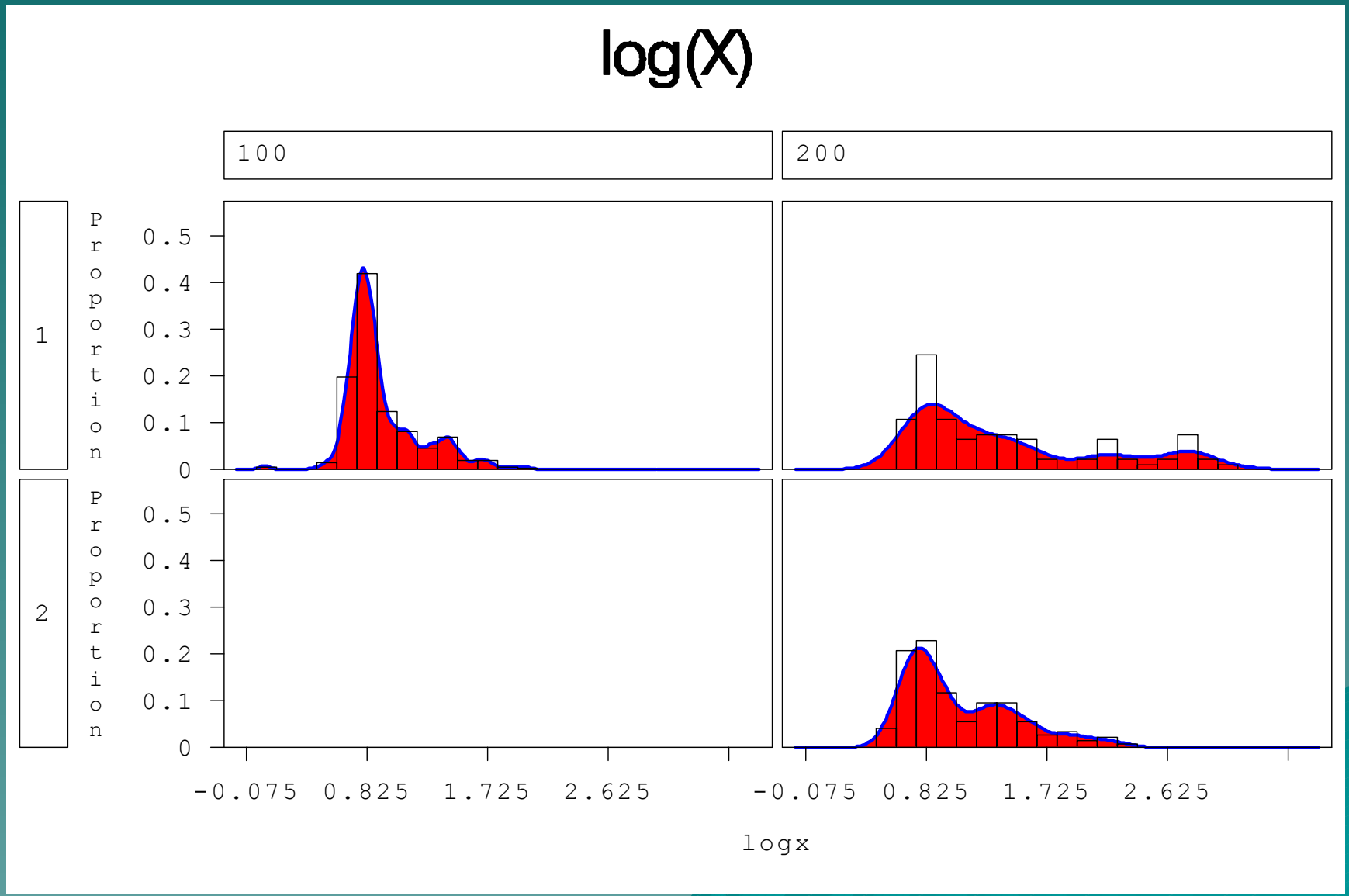
Different Smoothing Values



More SAS Code

```
ods rtf file="t:\presentation.rtf";
Proc Univariate Data=d1smooth;
   Class c1 c2;
   Var logx;
   Histogram logx /
                  kernel(c=1.5 k=normal  fill w=3)
                   vscale=proportion
                   ;
run;
ods rtf close;
```

.rtf Output for Bandwidth of 1.5



Thanks.