to the number of long joints, or fissures, observed in that direction.

The following is the table of observations referred to.*

General Table of Results for the Secondary Rocks of Yorkshire.

Names of Formations.	No. of Observations in Yorkshire.	W. by N.	W. N. W.	N. W. by W.	N. W.	N. W. by N.	N. N. W.	N. by W.	N.	N. by E.	N. N. E.	N. E. by N..	N. E.	N. E. by E.	E. N. E.	E. by N.	E.
Magnesian limestone	4				1		1		1		1						
Coal -	3						1	1	1								
Millstone grit -	13					1	5	2							4	1	
Chert group -	17				1	4	6						1		4	1	
Yordale series -	35		2		1	1	8	$5\frac{1}{2}$	$5\frac{1}{2}$				2	1	3	2	4
Lower limestone	15	1			4	1	2	1	2					1	1		2
Red sandstone -	1									1							
Whin sill	1																1
	89	1	2	0	7	7	23	$9\frac{1}{2}$	$9\frac{1}{2}$	1	1	0	3	2	12	4	7

It appears that some remarkable differences of characters belong to the joints and fissures in rocks of different chemical and mineral quality. In limestone the joints are usually rectangled to the planes of stratification, and frequently open and regular; in gritstone they are very irregular, but often widely open; while in argillaceous rocks they are usually much more numerous, but far less open, and often oblique to the planes of stratification. In conglomerate rocks there are few regular joints, but the rude fissures are sometimes remarkably large.

On considering the occurrence of joints with reference to the age of the rocks, it appears quite certain that it is among the older rocks that joints are most numerous and symmetrical. If we compare in this respect the old argillaceous slate, to the shale of a coal tract, and then with the clays of an oolitic district, or make a similar comparison of the ancient primary

* Geology of Yorkshire, vol. ii. p. 97.