

ning you choose, the greater your distance from the average or most probable condition into which, in the long-run, things must settle down; the more play for the equalising and levelling down of coming events. The world—or at least that part of the world accessible to our observation, and the playground of our activity—shows a large amount of available energy, or, expressed in a purely statistical manner, it started from a highly improbable condition, and it is descending or running down into a more probable or average condition. The doctrine of availability or of its reverse, of entropy—*i.e.*, of the loss of availability—turns out to be a theorem of probabilities; and the refined mathematical researches of Prof. Boltzmann and others show that these two conceptions can be made to cover each other. Moreover, we can bring home to the popular understanding the difference between the exceptional condition, with its large amount of available energy, and the average condition, with its large amount of self-destructive and wasted energy (or entropy), by the simile of order and disorder. For every arrangement of a crowd of things or beings which is orderly, there are innumerable arrangements which are disorderly; every one knows how easily the orderly arrangement lapses into disorder, and nobody expects by mere haphazard or chance movements to produce order out of disorder. There are thousands of ways by which a stone can fall from the peak of a mountain to the lower levels, but only one direction which would take it up again to the top. A tree has been suggested as the picture of the course that natural movements take: for the one position

31.  
"Availability" is  
theorem in  
probability.