

pour raised from the sea; and therefore if the sea were much diminished, and the land increased, the mean quantity of moisture distributed upon the land must be diminished, and the character of climates, as to wet and dry, must be materially affected. Similar, but opposite changes would result from the increase of the surface of the ocean.

It appears then that the magnitude of the ocean is one of the conditions to which the structure of all organized beings which are dependent upon climate must be adapted.

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## CHAPTER V.

### *The Magnitude of the Atmosphere.*

THE total quantity of air of which our atmosphere is composed is another of the arbitrary magnitudes of our terrestrial system; and we may apply to this subject considerations similar to those of the last section. We can see no reason why the atmosphere might not have been larger in comparison to the globe which it surrounds; those of Mars and Jupiter appear to be so. But if the quantity of air were increased, the structure of organized beings would in many ways cease to be adapted to their place. The atmospheric pressure, for instance, would be increased, which, as we have already noticed, would require an alteration in the structure of vegetables.

Another way in which an increase of the mass of the atmosphere would produce inconvenience would be in the force of winds. If the current of air in a strong gale were doubled or tripled, as might be the case if the atmosphere were augmented, the destructive effects would be more than doubled or tripled. With such a change, nothing could stand against a storm. In general, houses and trees resist the vio-