in Peru, is derived from the water of the rivers which they receive; and ſince this ſort of lakes has no exit or diſcharge but by the exhalation of vapours, and alſo ſince theſe vapours are entirely freſh or devoid of ſuch particles, it is certain that the ſaltneſs of the ſea and of ſuch lakes muſt from time to time increaſe; and therefore the ſaltneſs at this time muſt be greater than at any time heretofore. He further adds, that if, by experiments made in different ages, we could find the different quan­tity of ſalt which the ſame quantity of water (taken up in the ſame place, and in all other the ſame circumſtances) would afford, it would be eaſy from thence, by rules of proportion, to find the age of the world very nearly, or the time wherein it has been acquiring its preſent ſaltneſs.

This opinion of Dr Halley is ſo improbable, that it is ſurpriſing ſo acute a philoſopher could have adopted it. That freſh water rivers ſhould in the courſe of many thouſand years produce ſaltneſs in the ſea, is quite incredible. If this were the caſe, every ſea or great body of water which receives rivers muſt be ſalt, and muſt poſſeſs a degree of ſaltneſs in proportion to the quantity of water which the rivers diſcharge. But ſo far is this from being true, that the Palus Meotis and the great lakes in America do not contain ſalt but freſh water. It may indeed be objected, that the quan­tity of ſalt which the rivers carry along with them and depoſit in the ſea, muſt depend on the nature of the ſoil through which they flow, which may in ſome places contain no ſalc at all: and this may be the reaſon why the great lakes in America and the Palus Meotis are freſh. But to this opinion, which is merely hypotheti­cal, there are inſurmountable objections. It is a curious fact that the ſaltneſs of the ſea is greateſt under the line, and diminiſhes gradually as we advance to the poles: We muſt therefore ſuppoſe, if Dr Halley’s theory be true, that the earth contains more ſalt in the tropical regions than in the temperate zones, and more in the temperate zones than in the frigid; and conſequently that the rivers in theſe different regions contain a quan­tity of ſalt proportionable to their diſtance from the equator. This, however, muſt firſt be proved by ex­periment, and cannot be aſſumed as an eſtabliſhed fact. But there is another circumſtance that entirely deſtroys this theory. If we allow that the ſea receives its ſaltneſs from the rivers, it muſt be equally ſalt or nearly ſo in every part of the earth. For, according to a ſimple and well known principle in chemiſtry, *when any ſub*ſt*ance is diſſolved in water with the aſſiſtance of agitation, at whatever part oſ the water it is introduced, it will be equally diffuſed through the whole liquid.* Now though it were true that a greater quantity of ſalt were introdu­ced into the ſea under the line than towards the poles, from the conſtant agitation occaſioned by the wind and tide, the ſalt muſt ſoon pervade the whole maſs of water. To ſay that the ſuperior degree of heat in the tropical regions may diſſolve a greater quantity of ſalt, will not deſtroy our argument; for it is an eſtabliſhed principle in chemiſtry, that cold water will diſſolve nearly as great a quantity of ſalt as hot water can diſſolve.

The ſaltneſs of the ſea has alſo been aſcribed to the ſolution of ſubterraneous mines of ſalt which is fuppoſed to abound in the bottom of the ſea and along its ſhores. But this hypotheſis cannot be ſupported.

If the ſea were conſtantly diſſolving ſalt, it would ſoon become ſaturated; for it cannot be ſaid that it is de­prived of any part of its ſalt by evaporation, ſince rain­water is freſh. If the ſea were to become ſaturated, neither fiſhes nor vegetables could live in it. We muſt therefore deſpair of being able to account for the ſalt­neſs of the ſea by ſecond cauſes; and muſt ſuppoſe that *it* has been ſalt from the creation. It is impoſſible in­deed to ſuppoſe that the waters of the ſea were at any period freſh ſince the formation of fiſhes and ſea-plants: for as theſe will not live in water ſaturated with ſalt, neither will they live in water that is freſh; we therefore conclude that the ſaltneſs of the ſea has been nearly the ſame in all ages. This is the ſimpleſt hypotheſis of the three that has been mentioned. It explains beſt the various phenomena, and is involved in feweſt difficulties. We ſhall, however, allow that there may be ſome ex­ceptions; that the ſaltneſs of ſome ſeas, or of particu­lar parts of the ſame ſea, may be increaſed by mines of rock-ſalt diſperſed near its ſhores.

With regard to the uſe of this ſalt property of ſea- water, it is obſerved, that the ſaltneſs of the ſea preſerves its waters pure and ſweet, which otherwiſe would corrupt and ſtink like a filthy lake, and conſequently that none of the myriads of creatures which now live therein could then have a being. From thence alſo the ſea-water becomes much heavier, and therefore ſhips of greater ſize and quantity may be uſed thereon. Salt­water alſo doth not freeze ſo ſoon as freſh-water, whence the ſeas are more free for navigation. We have a diſſertation, by Dr Ruſſel, concerning the medical uſes of ſea-water in diſeaſes of the glands, &c. wherein the au­thor premiſes ſome obſervations upon the nature of ſea- water, conſidered as impregnated with particles of all the bodies it paſſes over, ſuch as ſubmarine plants, fiſh, ſalts, minerals, &c. and ſaturated with their ſeveral ef­fluvia, to enrich it and keep it from putrefaction: whence this fluid is ſuppoſed to contract a ſoapineſs; and the whole collection, being pervaded by the ſulphureous ſteams paſſing through it, to conſtitute what we call *ſea-water;* the confeſſed diſtinguiſhing characteriſtics of which are ſaltneſs, bitterneſs, nitroſity, and unctuoſity: whence the author concludes, that it may be juſtly ex­pected to contribute ſignally to the improvement of phyſic. The caſes in which our author informs us we are to expect advantage from ſea-water are, 1. In all recent obſtructions of the glands of the inteſtines and meſentery. 2. All recent obſtructions of the pulmo­nary glands, and thoſe of the viſcera, which frequently produce conſumptions. 3. All recent glandular ſwellings of the neck, or other parts. 4. Recent tumors of the joints, if they are not ſuppurated, or become ſchirrous or cancerous, and have not carious bones for their cauſe. 5. Recent defluxions upon the glands of the eyelids. 6. All defoedations of the ſkin, from an eryſipelas to a lepra. 7. Diſeaſes of the glands of the noſe, with their uſual companion a thickneſs of the lip. 8. Obſtructions of the kidneys, where there is no in­flammation, and the ſtone not large. 9. In recent ob­ſtructions of the liver, this method will be proper, where it prevents conſtipations of the belly, and aſſiſts other medicines directed in icterical caſes. The ſame remedy is ſaid to be of ſignal ſervice in the bronchocele; and is likewiſe recommended for the prevention of