

distribute the inclination throughout its whole length, in order to give a greater rapidity, as it is more easily effected by making the descent much greater at the beginning, than at the mouth, where it may almost be insensible, as we see it in natural rivers, and yet they preserve a rapidity so much the greater as the river is fuller of water; in great rivers, where the ground is level, the water does not cease flowing, and even rapidly, not only with its original velocity, but also with the addition of that which it has acquired by the action and weight of the upper waters. To render this fact more conceivable, let us suppose the Seine between the Pont-neuf and Pont-royal to be perfectly level, and ten feet deep throughout: let us then suppose that the bed of the river below Pont-royal and above Pont-neuf were left entirely dry, the water would instantly run up and down the channel, and continue to do so until it had recovered an equilibrium; for the weight of the water would keep it in motion, nor would it cease flowing until its particles became equally pressed and have sunk to a perfect level. The weight of water therefore greatly contributes to its velocity, and this is the reason that the greatest rapidity of the current is neither of the surface
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