

ly. The only distinction which they can draw, consistently with their own principles, between a miraculous and a common event, is that one comes to pass constantly and the other very seldom. They refuse to believe that a dead man has come to life, not because they assert it to be impossible, but because it is so rare as not to have come under their own observation. But the success of Louis Napoleon, or, indeed, any event in history, is so rare as to be unique. Why not refuse equally to believe in it? This is illustrated by an assertion quoted from the *Edinburgh Review*, that if any one should say that he had seen a hundred dice, thrown at random, all fall upon one face, he ought not to be believed. Putting aside, for a moment, the question as to the fairness of such a feat would it be a principle of natural philosophy with which we are acquainted, but the anecdote of this nature commonly told are much often false than true. It is less likely that the dice should all have fallen on one face, or the storks' legs been all cut off by one bullet, than that our informant should be venturing upon a pardonable exaggeration. It is not the mere rarity of the event which makes us doubt, but the internal evidence afforded by the texture of the anecdote to its having been mentioned by subjective rather than objective witnesses. Returning, however, to the more general argument, it is manifestly unfair. It is little better than a play upon words to say that the coming to life of a dead man is a rare occurrence, and that the conquest of Russia by a French Emperor is also rare. To give to the argument any pertinence, it should be shown that Napoleon's feats imply powers as exceptional as powers to overcome the ordinary laws of nature. We need not say that this would be asserted by no one. Philosophers may assert that we believe two and two to make four merely because experience teaches us that they always have made four when we have tried the experiment; but no such philosopher would deny that experience may establish truths of entirely different orders of certainty and universality. On whatever ground we rest, our disbelief in the capacity of chairs and tables for talking differs essentially from our disbelief in the existence of a man of lightning unequalled powers. It matters not if our scepticism in both cases arises from the rareness of the phenomenon. But to discuss this at length would lead us too far into metaphysical questions.

The great objection to the *Historic Doubts* is the objection to all weak arguments for a good cause. The apparent design is to endeavour to induce a belief in certain events, by arguing that we ought to be credulous. The result, of course, is to make persons who are imposed upon fancy that credulity is necessary to such belief. What object is carried out this principle by giving some credit to the stories of spirit-rapping impostures. If his arguments were to be logically carried out, they would certainly tend to place all such fictions upon a respectable footing; and this, in our opinion, would be in itself a sufficient proof of their weakness.—*London Sat. Review*.

#### RETARDED EBULLITION—BOILER EXPLOSIONS.

In former experiments Prof. Dufour showed that globules of water heated beyond 100° C. when surrounded by other fluids of the same density, boiled furiously if touched with pieces of wood, paper, cotton, &c., and he now finds that, like platinum, these various substances lose their power by frequent or continuous use. Partial renewals of the water occasioned diminution in the retardation of ebullition. Professor Dufour remarks that, according to experiments hitherto made on the retardation of the boiling point of water, it has been supposed that this effect is only witnessed in vessels of glass or porcelain. He adds in a note that M. Magnus records an instance of retardation in a vessel of platinum, and goes on to say that when ebullition is excited by diminishing pressure, water in contact with divers metals retards its boiling, and thus the mere contact of a metallic surface is not sufficient to counteract its tendency to maintain the liquid state. "When water is in a state of retarded ebullition it presents, in appearance at least, no special activity, although a very abundant and exceptional surface evaporation is really going on. It looks motionless and calm, no bubbles of gas or vapour disengage themselves from the mass or from the walls of the vessel. This liquid condition is analogous to an instable equilibrium, and ebullition may supervene all at once. The sudden transformation of a portion of the liquid into vapour sometimes occurs without any appreciable external cause; but we are nearly sure of provoking it, by giving a shock to the vessel, and sometimes we can do so by admitting a small quantity of air. It is not rare to see ebullitions follow a tolerable loud noise, such as a blow struck in an adjacent room, or the shaking occasioned by walking over the floor." Professor Dufour compares this action to the effect of agitation in exciting crystallization in super-saturated solutions of sulphate of soda. After reference to experiments of M. Marcet and others, the Professor observes that if the presence of a layer of gaseous matter on the surface of a liquid excites its ebullition, it must be interesting to know what effect would follow from keeping a gaseous layer constantly renewed on the surface of a body plunged into water. To ascertain this he immersed two platinum wires in water, and rendered them inactive by repeatedly boiling the liquid. It was then possible to obtain retardation of the boiling point to the extent of 10° or 15° C. A galvanic current was then transmitted through the wires, and gases were continually evolved from their surfaces, and it became

impossible to obtain the least retardation of the boiling point.—The currents of oxygen and hydrogen starting from the two electrodes, acted as provocatives to ebullition, the moment the change of pressure rendered that phenomenon possible. When ebullition had been retarded to the extent of 15° or 20°, and was suddenly excited by the electric production of these gaseous currents, an instantaneous commotion occurred as if gunpowder had been ignited.—*Intellectual Observer*.

#### LOUIS NAPOLEON'S LIFE OF JULIUS CÆSAR.

(*Spectator*.)

The Emperor assumes that Napoleon was as necessary to Europe—as true an expression of its latent wants—as Cæsar was of those of the ancient world. He endorses the vain speech of Napoleon at St. Helena. "What struggles, what bloodshed, what years will be required that the good I wished to do mankind may be realized?" Never was there a greater blunder. That Cæsar was wanted, that the world, civilized but in danger of anarchy, really thirsted for an absolute law under which mankind could sit secure, and that, the Church not having arisen to give the mighty idea of representative government to the world, this want could be obtained only through a personal rule, may be admitted. It is proved by the long peace which the world enjoyed under his successor, by the fact that for five hundred years no powerful nation or group of men, with one exception, endeavoured to establish any other principle of government. But Napoleon did not succeed. On the contrary, the work it took him fifteen years to accomplish was undone in a day, amid the rejoicings of liberated mankind. The nephew says the ostracism of the uncle did not prevent the resuscitation of the empire, any more than the murder of Julius prevented the reign of Augustus. We say it did. An empire has revived in France, and its chief is a Bonaparte; but it is not Napoleon's empire—not that terrible sway in which kingdoms were reduced to counties and nations to provincials, in which kings were lieutenants of the Cæsar and civilized Europe obeyed a conscription for the benefit of one man. Napoleon is great in the world because he has not restored the empire which his uncle failed to found—because England feels her individuality unmenaced, and Germany can advance on her freely-chosen path—because the national life of Italy has been set free, and unshackled—because all over the world the nations are helped to acquire the individual life which Napoleon would have extinguished under the gorgeously sculptured tomb. It was not the French, but the European empire, which Europe ostracized; it is the French, and not the European empire, which has been revived.

#### TWO LIVES IN ONE.

I am old now. My life has been as placid and uneventful as I could have wished; but there is one memory I possess, known to but few, which my family wish me to put before the world. In my old age I learn to submit to younger judgments, even as in my youth I submitted to my elders. In some cases extreme, I meet. I ask attention to my story only because it is true. Whether it is strange or not, I hardly know; it is strange enough to me.

More than fifty years ago my brother Stephen and I lived together in a village about ten miles south of London, where he was in practice as a surgeon. Stephen was thirty-two, I eighteen. We had no relations, but a sister, five or six years older than myself, and well married in London. Stephen was a solitary and studious man, living somewhat apart from his neighbours, and standing almost in a fatherly position towards me. Through the years we had lived together no one had thought of his marrying. Thus it was when the events I have to tell began. The house next to ours was taken by a Mr. Cameron, a feeble-looking man, rather past middle age, with one daughter, Marion, by name. How shall I describe her, the most beautiful creature I ever saw? She was perhaps twenty years old; I never knew precisely. A tall, slight form, fair complexion, dark chestnut eyes and hair, and an expression more like that of an angel than a human being. Though I was much struck with her appearance, Stephen did not seem to notice it; and we might have remained unacquainted with them for ever, but that he was required to help Mr. Cameron over an awkward stile opposite our house. Acquaintance once made, they soon grew familiar; for they had two feelings in common, a love of tobacco and Swedenborgianism. Many a summer evening did they pass, smoking the one and talking the other, Marion sometimes joining in, for she generally walked with them, while my chest, which was weak at that time, kept me at home. One day they quitted Stephen at the gate, and as he entered the door I said to him:

"How lovely Marion is! I am never tired of looking at her."

"Look at her while you may," said he; "she has not three years to live."

It was only too true. She had some dreadful complaint—aneurism, I think it was—which must carry her off in the flower of her days.—Stephen told me this, and had consulted the most eminent doctors without getting any hope; and the emotion, rare enough in him, that he displayed, told me he loved Marion. I said no word to him about it, I knew better; but I saw with what dreadful doubts he was perplexed.—Excitement might shorten Marion's life—such an excitement as a declaration of love from him might be of material injury; and even if it did not prove so, how could he condemn himself to the prolonged torture of seeing the life of a beloved wife ebb away day by day? Besides, he did not think she cared for him. I, who had watched her tirelessly, knew that she loved him with her whole heart. He struggled with himself fiercely; but he won the fight. He left home for some weeks and returned, looking older and paler; but he had learned to mention her name without his voice quivering, and to touch her hand without holding his breath hard. She was pining away under the influence of his changed manner, and I dared not help my two drillings