

up as it rears its ears of grain above the earth. How does it accomplish this delicate bit of masonry? The cells of the stems select from the mineral solutions brought up by the roots a silicate of potash, which the cell further decomposes, and then places the molecules of silica in regular order on the coats of the stem. Now, Sir, you cannot for a moment contend that this vital, immanent act of selection and assimilation, in the growth of a plant is at all analogous to the physical transient act of aggregation, in the forming of a crystal. If the production of life were a purely physical problem, animals and plants could be as readily produced in our laboratories as crystals of alum and salt. But the greatest chemist of this age, with all the resources it has placed at his disposal, has never been able to produce the simplest animated organism. Nor is there any proof whatever of a living structure being formed by the motion which posits the molecules of a crystal, although such motion is equally the work of intelligence. Still less reason is there to ignore a living, guiding inscrutable force, superadded in organic beings to the tremulous motion of the inorganic crystal. Vital and physical forces are therefore essentially different, though they equally manifest the workings of the hand of God; and hence the conclusion you draw from the only apparent analogy existing between them, in the growth of a grain of corn and the formation of a crystal, is in the highest degree fallacious.

*Ec.*—You think, then, that the forces in nature are distinguished; and the reason that you advance is that everything clearly evidences that this motion is guided by intelligence. Readily do I agree with you, but *that intelligence* is matter itself evolving its varied forms through the force of certain peculiar affinities which matter has outside of its general relations. Well has Professor Houghton of the Royal Institute said while viewing those beautiful crystals as formed by mother-earth: "*De opifice testatur opus.*" Truly! Truly! the world is a great geometer!

*Sc.*—But I would again ask you why? Why this particular affinity: like any other effect, it must have a corresponding cause. What that cause is you Evolutionists cannot tell. Indeed one who would admit that vital and physical forces are identical admits necessarily the absurd theory of spontaneous generation.

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## A REVIEW OF AN IMPORTANT PHASE IN IRISH HISTORY.

[From the Dublin Irish Monthly]

Without the past history of Ireland neither 1798, nor O'Connell, nor Young Ireland would be comprehensible. The popular English idea of former days was that of a few imaginative and somewhat shallow youths, drunk with politics and poetry, if not whiskey, who had parted company with common sense and common morality alike. This was the view presented to the English public by Mr. Marmion Savage in his novel of "Young Ireland." This and worse was the view presented by Mr. Thackeray, in the columns of *Punch*, in which he termed Davis another Marat. Phrases and caricatures of this kind would hardly to-day be considered a sufficient explanation of the phenomena. Take, for example, Davis and John Mitchel. Davis, a southern Protestant, born in Mallow, reared in the anti-Irish and anti-Catholic atmosphere which then surrounded the

southern fully as much as the northern Protestant; educated in Trinity College, in those days the hot-bed of all the violent passions of ascendancy. John Mitchel, descended from Scottish settlers, and himself the son of a Presbyterian clergyman of the North of Ireland. How came it to pass that these men, so born, so nurtured, each in his own place wide apart from the other, yet became both imbued with so strong a passion for Ireland and her nationality that they would have gladly flung away a hundred lives in her cause? If you desire to comprehend that phenomenon, says Sir Gavan Duffy, read the history of Ireland, or read this brief condensation of it. There is certainly no abler chapter in "Young Ireland." The composition is clear, ripe, pointed, weighty, unanswerable. Let us pause upon the following account of the Ulster iniquity in the beginning of the seventeenth century, epitomized as it is almost to the bone:—

"Without delay James and his counsellors set to work. The king applied to the city of London to take up the lands of the wild Irish. They were well watered, he assured them, plentifully supplied with fuel, with good store for all the necessities for man's sustenance, and, moreover, yielded timber, hides, tallow, canvas, and cordage for the purpose of commerce. The Companies of Skinners, Fishmongers, Haberdashers, Vintners, and the like, thereupon became absentee proprietors, and have drawn Irish rents from that day to this. Six counties in Ulster were confiscated, and not merely the chiefs, but the entire population dispossessed. The fruitful plains of Armagh, the rich pastoral glens that lie between the sheltering hills of Artrim, the undulating meadow lands stretching by the noble lakes and rivers of Fermanagh, passed from the race which had possessed them since before the redemption of mankind. It is not difficult to see in imagination the old race, broken by battle and suffering, and deprived, by a trick of State, of their hereditary chiefs, retiring slowly and with bitter hearts before the stranger. The alluvial lands were given to English courtiers, whom the Scotch king found it necessary to placate, and to Scotch partisans, whom he dared not reward in England. The peasants, driven out of the tribal lands, to burrow in the hills or bogs, were not treated according to any law known among civilized men. Under Celtic tenure the treason of the chief, if he committed treason, affected them no more than the offences of tenant for life affect a remainder man in our modern practice. Under the feudal system they were innocent feudatories who would pass with the forfeited land to the Crown, with all their personal rights undisturbed. It was in this manner that the famous plantation of Ulster was founded.

"The method of settlement is stated with commendable simplicity by the latest historian. The 'plantators' got all the land worth their having; what was not worth their having—the barren mountains and trackless morass, which, after two centuries, still in many cases yield no human food—were left to those who, in the language of an Act of Parliament of the period, were 'natives of the realm of Irish blood, being descended from those who did inherit and possess the land.' The confiscated territory amounted to two millions of acres. 'Of these a million and a half,' says Mr. Froude, bog, forest, and mountain, were restored to the Irish. The half million acres of fertile land were settled with families of Scottish and English Protestants. The natives were not altogether content with this arrangement, and their perversity has been visited with eloquent censure by indulgent critics down to our own day. There is reason to believe, however, that if a settlement of