

I.

ON THE NORWEGIAN ORIGIN OF SCOTTISH BROCHS. By JAS. FERGUSSON, D.C.L., F.S.A. Scot., &c.

In the autumn of the year 1876 I wrote a short essay on the "Brochs in the North of Scotland," which was originally intended to have appeared in the *Contemporary Review*. When, however, it was in type, the editor decided it was too long for his pages, and refused to admit it unless it was cut down to an extent that would have rendered its arguments unintelligible. Under these circumstances I had no alternative but either to allow the type to be distributed or to publish it on my own account as a pamphlet.¹ I chose the latter course, because, though too short for an independent publication, it still stated my views with sufficient fulness to be generally intelligible, while these appeared to me so clear and irrefragable that I could not understand why they had not been generally adopted. I was at the same time most curious to know what could be urged against them, and hoped that, by publishing a distinct statement of the case, as I understood it, I might provoke a rejoinder, and that the discussion thus raised might tend towards the settlement of one of the most disputed but most interesting questions of Scottish archæology.

¹ "On the Age and Uses of the Brochs and the Rude Stone Monuments of the Orkney Islands and the North of Scotland." By James Fergusson. London: W. Mullan & Son, 34 Paternoster Row. 1877.

In this hope I have not been disappointed, inasmuch as in the last number of the "Proceedings" of this Society there appeared (pp. 314-355) a most exhaustive reply to my arguments by the learned Curator of your Museum. From his personal experience and previous writings on the subject, there is probably no man living who is better qualified than Mr Anderson to speak authoritatively on such a subject; but, so little do his arguments appear to me to settle the question, that if my paper had also appeared in your "Proceedings," it might not perhaps have been necessary for me to revert again to the subject; but, as very few indeed of the hundreds who possess and read your publications have access to my isolated pamphlet, I am anxious that a re-statement of the main points at issue should appear in the same place, so as to be accessible to the same parties.

I have, however, no wish on the present occasion to reiterate what I have already said, nor any intention of attempting to answer Mr Anderson's objections in detail. All I desire is to be allowed to state the principal reasons which induce me still to believe that the Brochs were erected by the Norwegians, in order that the two sides of the question being stated in the same place, all who have access to the Society's publications may be able to form their own opinion as to which view is most consonant with the facts of the case.

I am the more anxious to be allowed to do this, because Mr Anderson, though stating his case with perfect fairness, seems to me to base his argument on analogies and details which appear to me comparatively unimportant, while he does not seem to appreciate those main features which, from my point of view, are all-important. So far as my experience goes, the great tendency of controversies of this class is to get smothered in details, and to such an extent as to obscure the main facts at issue. When there is no direct evidence there must be difficulties, as a matter of course. To some persons these appear insuperable, and the case is judged accordingly, though the real importance of these details often depends very much on the way they are stated, or on the previous tendencies of the person who states or of those to whom they are addressed. The great difficulty is to keep steadily in view the main points at issue; when they are decided, either one way or the other, the details will generally be found to be easily explicable on either side, and may

consequently, at first at least, be put aside for future examination. In the present instance, by confining attention to the essential peculiarities of the Brochs, and ignoring all arguments, except those derived from the internal evidence they themselves afford, we will probably arrive at clearer conceptions on the subject than by any other process.

In the case of the Brochs, the difficulties would be nearly insuperable, if an appeal did not lie to the principles of common sense. In every part of the world human nature may be calculated upon as pretty much the same. Men in the same situations, or impelled by the same necessities, will be guided by similar motives, and their architectural performances, at all events, will be so like those of others that they may be compared with certainty, and their history and uses obtained without much fear of error.¹ In the present instance, if it can be ascertained that the Brochs are more suited to the position and purposes of the Celts than to those of the Norwegians, it is hardly necessary to look further. Nothing certainly is known that would induce any one to reject the inevitable conclusion, if arrived at with sufficient care. If, on the other hand, it can be shown that they are more appropriate to the wants and conditions of Viking life, we need hardly perplex ourselves with analogies or details that may or may not have any real bearing on the subject.

The one great fact which it is indispensable should be borne in mind, in order to appreciate what follows, is, that the Brochs are essentially works of fortification, and can only be understood when treated of according to the known principles of military science. Fortunately, whether applied to castles, citadels, or towns, these are few and simple, and

¹ A curious illustration of this proposition will be found in a work on Peru,¹ just published by the celebrated American antiquary E. G. Squier. One-half of his architectural illustrations are so similar, both in the polygonal form of their masonry and even in their architectural details, that they would hardly excite criticism if described as taken from the Etruscan cities of Italy or the Pelasgic remains in Greece, while many of the others are so like the rude stone monuments of Europe, that he does not hesitate to call them Druidical. It need hardly be added that no possible connection between Europe and Peru can be traced in historical times before the time of Columbus, and that the coincidence can only be explained by the hypothesis that men all over the world, possessing similar materials, use them nearly in the same manner when required for the same or nearly the same purposes.

¹ "Incidents of Travel and Exploration on the Land of the Incas." By George Squier. Macmillan London, 1877.

nearly identical in all ages and countries. Forms have altered to resist new weapons of attack, but the principles have remained unchanged throughout. If, in consequence, it is ascertained that the principles on which the Broch system was designed differed from those adopted anywhere else, we may feel certain that it was because it was applied to some purpose of which we have no other example; but, being thus exceptional, there ought to be no difficulty in ascertaining what these changes in principle were, nor of explaining the causes that led to their introduction. When we have eliminated these, the residuum ought to contain the truth we are seeking, and there is probably now no other mode available by which it can be reached. My conviction is, that the origin and uses of the Brochs can be ascertained with certainty by this method, and the object of the following remarks is to try and make this as clear to others as it appears to myself.

If the Brochs had been either Sepulchres or Temples, the case might have been different. If the former, we might be obliged to investigate the funereal usages of all the races who may have erected them; and if unable to acquire a perfect familiarity with these rites, we might be puzzled by survivals we could not account for, or led astray by false analogies arising from imperfect knowledge. In like manner, had they been Temples, unless we were intimately acquainted with the mythology of all those races who may have been their builders, we should have no means of judging how far their forms were due to artistic or constructive necessities, or what was due either to religious sentiment or traditional association. We are saved, however, from all such difficulties from the fact that the Brochs being wholly and solely utilitarian works of fortification, and as such governed by the same laws which dictated the forms of all works of defence in all ages and in all parts of the world.

From the earliest times to which our knowledge extends, through all the Middle Ages, and down to the curiously complex system of the present day, none of man's architectural works have been subject to such rigid and unchangeable laws of utilitarian use, as works of fortification. Nothing has been added from caprice or from feelings of any sort, and very little indeed for the sake of ornament. Use, and use only, governs every form and every detail. To such an extent is this carried that a military engineer can tell at a glance the purpose of every form and detail,

and in almost every instance can detect at once the reason why a fort was placed where it stands. If consequently the Brochs are works of fortification—which no one doubts—their age and uses ought to be easily ascertainable by the application of the same rules which govern all other works of their class, and it is, I believe, because they have not hitherto been looked on from this point of view that any uncertainty exists regarding them.

If there were any form or feature in the structure of the Brochs whose date or origin could be ascertained with certainty from extraneous evidence, the case would be different; or if it could be shown that the objects sometimes found in the Brochs really belonged to their builders, and if the character of these things was such as enabled us to recognise the race who introduced and used them, it might modify our conclusions. Nothing of the sort has, however, yet been done in such a manner as to invalidate the inevitable conclusions derived from the study of the art of fortification, whose principles are as immutable as its forms are varied. But through all its mutations, there is no single exception, so far as I know, to the few ruling and easily intelligible principles that govern the design and location of all works of this class, and which consequently, if applied to the Brochs, ought to lead with certainty to a knowledge of their age and uses.

Before attempting this, however, it may be well to say a very few words on two points which have been considered most important in their bearings on the origin of the Brochs. It is argued they cannot be Norwegian, because there are no Brochs in Norway. This is admitted; but the same argument applies to all other countries. It may be argued with equal force that they are not Celtic, because there are none in Celtland except four, to be alluded to hereafter; there are none in Pictland, though that was inhabited by Celts much more nearly approaching in condition and position to the inhabitants of Brochland than the Norwegians. There are none on the Isle of Man, nor in Ireland, unless the Round Towers be considered as such, nor in those parts of England which we know were in historic times inhabited by Celts; and none are found in any part of France, though that was undoubtedly a Celtic country. By a parity of reasoning they were not erected by Saxons or Teutons, nor in fact by any one else. If, indeed, we are to wait till a Broch is found

elsewhere before determining who their builders were, we may wait a very long time yet,—the truth of the matter being, they are a local invention and not a foreign importation nor copied from anything found elsewhere. As no Brochs are known to exist in any part of the world beyond a certain district in the north-western parts of Scotland, their origin must be due to some circumstances peculiar to that district, and no argument, either direct or negative, can, I conceive, be based on the fact that no analogous structures have been found elsewhere.

In like manner it is said the Norwegians built all their halls and homes in their own country in wood, at the time when the Brochs must have been erected in Scotland, if erected by them. This also may be freely admitted, but the explanation seems obvious. Denmark, Sweden, and Norway were, in all historic times, covered with forests, and timber most suitable for building purposes was everywhere available; while, as I have frequently had occasion to remark, timber is, in all cases, a building material infinitely superior to stone, where great durability is not a consideration, nor fire much to be feared. So they certainly thought in Norway where almost all the ancient churches seem to have been in wood; and many ancient ones, as at Burgund, Urnes, and Hitterdal, exist to the present day.¹ In Japan, at the present day, all the palaces and temples are in wood above the foundation; and in India till the Greeks, after Alexander's time, taught them the use of stone in architecture, everything they erected was in wood. We know in fact that, though a highly civilised people, the Indians did not possess a single architectural building in stone till after 300 B.C.² Stone, and not wood, was the original type from which the architecture of Egypt was derived; but in Lycia, and on the other shores of the Mediterranean, we know from their tombs and other building that they used wood down to the time of Alexander. They used wood in Scandinavia, because it was everywhere available and of the most suitable quality. It was not used in those parts of Scotland where the Brochs are found, whoever built them, simply because these regions are, and always were, so far as we know, absolutely treeless in all historic times. They had, however, on the other hand, rocks of self-faced sandstone or of schistose slates, forming the most excellent building materials,

¹ See my "History of Architecture," vol. ii. p. 116, &c.

² *Loc. cit.*, vol. iii. p. 47, *et seq.*

and which were also easily fashioned for building purposes with less trouble and expense than almost any materials of the sort to be found elsewhere.

Neither of these arguments therefore, nor, so far as I know, does any reasoning derived from extraneous sources, throw any important light on the investigation. From whatever point of view the question is looked at, we are forced back on the conclusion that the origin of the Brochs is due to some distinct local peculiarity. There must have been something either in the race or institutions, or political position of the people inhabiting the region where the Brochs are found, which necessitated the adoption of this form of architecture. That peculiarity seems undoubtedly to have been the presence of the Northmen, or Norwegians, in these countries, and, though this does not decide the question as to who the builders were, it narrows it down to a very simple proposition. Either it was that the Brochs were built by the Celts to defend themselves and their country against the attacks of the Norwegians, or they were erected by the northern people to defend themselves and their property against the Celts; and also, it may be, against their own countrymen.

To Mr Anderson is due the credit of rescuing the Brochs from the dust-bin of prehistoric antiquity into which the antiquaries of the present day are too apt to sweep everything that puzzles them.

His dates are distinct and well defined. "They were all," he says, "erected by the Picts not earlier than the fifth, nor later than the ninth, century."¹ It may be possible to carry them down a century later. Some on the main land, I fancy, may have been erected as late nearly as 1000 A.D.; but this is of little consequence. It is a great thing that all are agreed they were erected in the five centuries that elapsed between 500 and 1000 A.D. It may be a little more or less, for the Celtic theory presupposes the ravages of the Northmen to have commenced before the erection of the earliest Brochs, and we have as yet no proof of their raids having commenced in the fourth century. Certain it is at least that the Brochs were not erected in anticipation of attacks that had not then taken place. These must have been long continued and become intolerable before men could have been forced into inventing and adopting this peculiar mode of forti-

¹ "Archæologia Scotica," v. p. 146.

fication. It is, however, of little use attempting to argue this question. If a Broch can be shown to have been erected in the fifth century, the Northmen must have been troublesome in these seas in the fourth; and, on the other hand, if the Northmen can be proved to have infested these seas at so early a period, there is no improbability, according to the Celtic theory, of the Brochs being as early as Mr Anderson supposes. I am afraid the materials do not exist at present for settling the exact age of the earliest Broch.

A much more important point is their distribution. That, fortunately, is ascertained within limits quite near enough for any argument that can be based upon it, and the main facts are fairly represented in the following table, compiled from the data furnished by Mr Anderson in the fifth volume of the "Archæologia Scotica" (p. 198):—

		Brought forward,	322
Shetland,	75	Inverness Mainland,	6
Orkneys,	70	Inverness Islands,	41
Caithness,	79	Forfarshire,	2
Sutherland,	60	Perthshire,	1
Ross Mainland,	10	Stirlingshire,	1
Island of Lewis,	28	Berwickshire,	1
Carry forward,	322		374

This, however, he adds, "is exclusive of a large part of the west coast of Ross-shire, of the whole of the mainland of Argyll, of the whole of the outer Hebrides south of Harris, and of the islands south of Skye." In other words, if we assume the line of the Caledonian Canal as dividing Scotland into two not very unequal parts, we have 400 or 500 Brochs on its northern side,—or, more correctly, north-western side; and four, or at the utmost five, on its southern side. I have already explained why I do not consider Eden Hall, in Berwickshire, as a true Broch, and tried to account for the existence of the four in Pictland, so I need not recapitulate the facts.¹ It is of the least possible importance whether I am correct in this or not; the existence of the four or five is exceptional, and has no real bearing on the argument.

¹ "The Brochs," &c., p. 13.

I am not aware of the existence of any map that quite correctly represents the possessions of the Norwegians in Scotland; that published by Mr Skene in his "Celtic Scotland" (p. 396) is the best I know, and though that is objected to by Mr Anderson as not quite correct, it is at all events quite sufficiently so for the purpose of our argument. It represents the parts occupied by the Northmen as so nearly conterminous with the region of the Brochs as to leave no doubt that the presence of the Norwegians was the intrusive element that gave rise to their erection. To me it appears to make it clear that they must have been built by the Northmen themselves, because I cannot understand what essential difference existed between the Celts on the two sides of the valley of the Caledonian Canal that would induce those on the one side to cover the country with Brochs, while the opposite side is without any signs of their existence. The east coasts of Scotland, as well as those of the southern islands and Ireland, were equally exposed to their ravages; and if the Celts in the north and west found them so effective that they built 400 or 500 of these towers, it seems strange that only four or five should be found in all the rest of Celtland, assuming that they were the produce of that race. Besides this, as the problem the Celts had before them was the very simple and usual one—How best to defend themselves against a foreign invasion—it seems even more strange that instead of adopting the principles of fortification used by all other nations for that purpose, they should have gone out of their way to invent and so long adhered to the Broch system, which any one could have foreseen would be as ineffectual for that purpose as it afterwards proved to be. As this, however, does not strike others in the same light, it need not be insisted on at this stage of the argument. I think it final; but putting it at present on one side, all I wish now to point out is, that Norwegian Scotland is practically identical with the land of the Brochs, and consequently that either they or the Celtic inhabitants of that region, whom they ultimately dispossessed, were the persons who built them.

It would clear away a great deal of the difficulty that now besets the argument, if we could attain any distinct idea of the state of civilisation to which the Celts in the north-west of Scotland had reached during the Broch period, 500 to 1000 A.D. From all I can learn or have seen, I consider that they were then in about as low a stage as it is possible

for any race of men to exist in. Not that I for one moment doubt the capabilities for civilisation of the Celtic race. On the contrary, I believe them to be susceptible of a more rapid and certainly more brilliant, perhaps even of a higher degree of civilisation than their Saxon or Teutonic rivals. But they are eminently gregarious, and it is only when congregated in cities, or on fertile plains, where the conditions of life are easy, that they advance. They have never, so far as I know, shown that steady self-reliant independence which renders the Saxon everywhere so invaluable as a colonist, and has enabled him to people uninhabited islands, and to build noble cities and establish flourishing communities where the forest and the swamp were only inhabited, before his advent, by wild animals, or by a few wretched savages living on the verge of starvation. My conviction is, that in so rugged a country as the Western Highlands of Scotland, and with so inhospitable a climate, a sparse population of Celts never could have risen to anything like the degree of civilisation to which they attained early, in more favoured lands; and all we know of their history confirms this impression.

Even at the present day, nothing can be more wretched than the miserable bothies or beehive huts in which the inhabitants are content to dwell,¹ and before the "45" there is reason to believe that the state of the clansman was even worse than it now is. What towers or stone buildings were found in the Northern Highlands were erected by chiefs or lairds who had access to such centres of civilisation as Inverness, Perth, or Edinburgh, who were in fact educated men, and required a style of living superior to that of their dependants, which, so far as I am able to judge, must always have been miserable in the extreme.² If, however, there is anything to be said in opposition to this view, it has not, so far as I know, been yet given to the public. No one has yet been able to point to any city built, any community founded, or any organisation for any civilised purposes among the Celts in the country of the Brochs during the five centuries

¹ "Proceedings Scot. Ant." vol. viii. pp. 192 *et seq.*

² In the preface to the "Book of Deer," the late John Stuart gives an account (page cli.) of Sir Ewen Cameron bringing home his bride at the end of the last century to a wattled house near Kingussie, and throughout that treatise argues, with a learning that it would be difficult to surpass, that this was only a fair example of the Scotie work of that age, and *à fortiori* an improvement on an earlier one with which we are at present concerned.

of which we are now treating. What civilisation they possessed was due to Irish priests, who taught them the principles of the Christian religion, and planted among them the rudiments of ecclesiastical institutions, which shed a dim ray of light through the darkness of the surrounding barbarism. It was, however, a foreign light, and can in no instance be traced to be a national source.

This, however, is not the place to argue such a question. If it can be shown that the Celts in this land reached a degree of civilisation between the years 500 and 1000 sufficient to render it probable that they were the builders of the Brochs, it has not yet been done, and till it is, it seems more probable that the men who could build ships and organise fleets which were the terror not only of the north of Scotland, but of England and Ireland, and even of France, were a superior race, and, in so far at least as constructive necessities were concerned, more likely to be the builders of the Brochs. Even, however, if a better case can be made out for the civilisation of the Celts in Brochland than I am willing to admit, it must I think be conceded that the Norwegians were their superiors, not only for the reasons just stated, but because they conquered and occupied their country, and finally extirpated or expelled the Celts from those islands and the parts of the Continent where they first and most frequently settled. We know their position and prowess; we wait for an account of that of the races they conquered and annihilated.

These preliminary remarks might easily be extended to any length, and ought to be to a very much greater extent than is here attempted, if it were intended to base any argument upon them. This, however, is not the purpose for which they are brought forward, but merely to clear the ground so as to admit the main points at issue being clearly stated, so that a decision may be obtained regarding them, free from the incumbrance of any collateral topics:—

Broadly these may be stated as follows:—

- 1st. The Brochs were erected between 500 and 1000 A.D.
- 2d. They are found only in those parts of Scotland that were first infested by the Norwegians and afterwards occupied by them.
- 3d. Consequently they were either erected by the aboriginal Celtic population to protect themselves and their country against the attacks of the Northmen, or they were built by the Vikings, first as a basis for

their operations further south, and afterwards to hold the country till the establishment of a settled government among them enabled them to dispense with these fortified posts.

What we have now to determine is which of these two theories accords best with the local position or structural peculiarities of these towers. In the absence of any direct testimony on either side, I know of no means by which the question can be so satisfactorily settled as by carefully examining first one typical Broch and then a group of them, and trying to ascertain how far they agree with or differ from the conditions involved in these two categories.

For a single example there can be little hesitation in selecting that at Mousa, not only as the most perfect of all those remaining, but also because it is the best known, and, in describing it, because we have the invaluable assistance of Sir Henry Dryden's beautifully correct and detailed drawings, which leave nothing to be desired as to the facts of the case. It is also an immense advantage that these were published in the fifth volume of the "Archæologia Scotica," so that they are accessible to all Fellows of this Society, and that they are quoted and relied upon by Mr Anderson in his paper in the last number of your "Proceedings."

The island of Mousa on which this Broch is situated is about one mile and a half long, north and south, and three-quarters of a mile wide at its greatest breadth, and may contain some 300 acres of indifferent land.¹ It is separated from the mainland by a narrow strait less than a mile in width. It is on the shores of this channel, close to the waters edge, that the Broch is situated. It is a tower 50 feet in diameter at its base, and even now in parts upwards of 40 feet in height. Internally, at what may be called the floor line, its court is 20 feet in diameter, and its walls, 15 feet thick, are honeycombed with galleries and beehive apartments. There are three of the latter on the ground floor and six of the former, one above the other, with a staircase in the thickness of the walls giving access to each, and also to the bartizan on the top of the walls.² Altogether it is a most

¹ As the Ordnance Survey of these islands has not yet been published, it is not possible to speak exactly on these points. The best accessible map I know is the Admiralty Chart, but that is on a very small scale.

² These particulars are quoted in round numbers from Sir Henry Dryden's plates xxi. and xxii. in vol. v. "Arch. Scot.," to which the reader is referred for further details.

imposing structure, showing a very great degree of constructive skill, and capable of accommodating a considerable garrison and a large amount of stores.

The island is now entirely devoid of inhabitants of any sort, though when Hibbert wrote his "History of the Shetland Islands" there were apparently on it some farm cottages, though whether they were permanent residences, or merely the abode of shepherds who brought their flocks over in the summer to pasture on the grass, is by no means clear. A very different state of affairs must have existed in the pre-Viking period, if the Celtic theory of the building holds good. The island must not only have been populous, but wealthy, or the inhabitants would never have undertaken to build this great tower to protect themselves and their property against the Northmen.

What then were the inhabitants of this island when the Broch was built? Hardly fishermen, for a tower of this sort is singularly ill-adapted for defending either the boats or the nets, which are generally the only property of men following that vocation. Besides, fishermen generally congregate round the shores of some bay where their boats can be secure, and where they can afford each other mutual comfort and assistance. The sea is open to all, and there is no reason why they should seek a solitary island as a fishing station, while any part of the mainland would be equally convenient; nor is it likely, on the other hand, that the Northmen would seek to destroy an industry of this sort, but rather to encourage it, for their own convenience and possible profit.

Were they addicted to pastoral pursuits? Of all places in the world a Broch is the least suited to shelter sheep and cattle in a time of invasion. In this instance the true floor of the Broch is practically cut in the rock, 4 feet below the level of the sill of the entrance, and probably this part was used either as a store or as a water tank; and a few sheep or cattle huddled together in a circular court about 20 feet across would very soon defile anything that was there, and in a very short time breed a pestilence that would render the tower untenable.

Were they agriculturists? The Broch could not protect their corn while standing, nor their stacks when reaped; and even when threshed out a Broch would prove a singularly inconvenient granary.

Perhaps it may be said the inhabitants of Mousa, in the Celtic period,

were all these, and having prospered and become rich did not hesitate to abandon what was outside to the Northmen, and only cared to protect themselves and their personal property against their ravages. In that case they certainly would have erected their castle as near the centre of their possessions and as far from the sea as they possibly could get, that all might have a chance of getting inside on the appearance of a hostile bark and carrying with him what he could gather up in his haste. But this is exactly what has not been done. The Broch is situated within 80 feet of the shore, and with its entrance turned towards the sea, so that the crew of the attacking bark could command the entrance with their arrows from the deck of the vessel, and after their appearance ingress and egress were alike impossible. Had the tower been situated on the edge of a cliff, with only a passage 2 or 3 feet in width between it and the tower, it might be intelligible, for in that case only one or two of the attacking party could approach the door at a time; but in this instance there is an esplanade 18 to 20 feet wide, and beyond that, not a cliff but a sloping bank sufficiently steep to protect the besiegers, when approaching the tower, from the fire of the defenders, but not in any way to hinder their approach.

We all know from examples on the Continent or in border counties what a fortified farm is. One side or one angle may be occupied by a tower in which the family reside, and the cattle may occupy the lower story; but one indispensable feature is a "basse cour," which covers the entrance and into which the cattle may be driven, and where fodder and food may be stored to enable them to live during a siege.

In none of the Brochs is there anything of the sort. On the contrary, if the Celts built this tower to protect themselves or their property from invaders coming from the sea, they did it in a manner never, so far as I know, attempted before or since, and very unlikely, so far as we can judge, to have been successful.

It is necessary, however, according to the Celtic theory, to assume that they were perfectly successful. The Brochs were not all built at once. One or two were, no doubt, first erected; and when it was found that they were sufficient to protect their builders against the Northmen, others were erected, and the system gradually extended itself, till in the course of two or three centuries, the 400 or 500 Brochs we know of covered the face of the country. If during that long period it had been found out that

they no longer sufficed to protect their owners, no more would have been erected. We may consequently confidently assume that the Broch at Mousa did protect its owners and prevent the Northmen from getting possession of the island for a very considerable period, say a century or so, but eventually either by force or by fraud it fell into their hands. When it did, any other people in the world would have sent their ships' crews with crow bars to the ramparts, and in the course of a few days, perhaps hours, they would have tumbled its inner walls into the court and the outer walls to the bottom, so as to reduce this stronghold of the pestiferous Celts to a mere cairn of stone which we should not now be disputing about. "Pu down the nests and the craws will fie awa" is a piece of practical wisdom found effectual in later times in Scottish history, and which would, I have no doubt, been put into practice in this instance, when the Northmen at last got possession of the coveted island which, it is assumed, the Celts with their tower had so long held against them.

When from this jumble of improbable, not to say impossible, suppositions, we turn to the hypothesis that the Broch on Mousa was erected by the Norwegians, all seems clear and reasonable. When the Northmen first perceived the advantage of making the Shetland and Orkney Islands a stepping-stone on which to base their further expeditions against the British Islands, no spot could have appeared more suitable for a settlement than this little islet. The narrow strait between it and the mainland afforded a secure anchorage for their *keels*, and the island was just large enough to afford pasturage for the sheep and goats or cattle which were indispensable for the support of the inhabitants of the Broch when all were at home, and the sustenance of its garrison when the bulk of them were away. The inhabitants of the island, if any, could offer no resistance to the well-armed warriors who invaded them, but could be made most useful in assisting in building the Broch, and in tending the cattle or in cultivating the land, when occupied by the invaders, and it is probably the hut circles of the Celtic dependents that are said to have existed around the tower in former days.¹

Under these circumstances, nothing seems more probable than that the Viking should proceed to build a tower which would not only accommodate himself and his followers when residing on the island, but which

¹ "Archæologia Scotica," v. p. 208.

would secure his possession of it and protect his property when absent, and do this with the smallest possible expenditure of men and material. So far as I know, no fortifications were ever more ingeniously contrived to meet these exigencies than the Brochs. Not only were they capable of accommodating a large number of persons when they were at home, but they were capable of defence by a smaller garrison than any similar work of the same importance. Three or four trusty retainers left behind were sufficient to hold the tower against any insurrection of the Celts, even supposing it to be on the mainland, but also against any brother Viking who might take a fancy for the plunder the Broch might contain during the absence of its owner on business on the high seas. It is this, in fact, which is the leading characteristic of the Viking's life and the most important feature in Broch construction. Had its defenders been always at home, a very different class of fortification would have been requisite, more like the fortified villages or camps adopted by all other nations, and which would have been adopted by the Celts had they ever attempted to defend their country by fortifications. It was because the circumstances of the Vikings were exceptional that their fortifications differed from all others. Their towers were designed to accommodate thirty or forty, but to be defensible by three or four, and so perfectly were they constructed, that they answered both purposes with a success not surpassed by any fortifications found in any other part of the world.

It would, of course, be in vain to look for any written record of the founding of a Broch. The Vikings were a singularly illiterate race, and the building of this or of any other of the 400 Brochs must have been so common an occurrence as hardly to be noted even by those most given to recording events. The tower of Mousa is, however, twice mentioned in the Sagas in a manner that renders it extremely improbable it was built by the Celts, or was ever in their possession. The first occasion was in about the year 900, when "Bjorn Brynulfson, fleeing from Norway with Thora, Roald's daughter, was shipwrecked on the island of Mousa, landed his cargo and lived in the Borg through the winter, celebrating his marriage in it, and afterwards sailed for Iceland."¹

From this narrative we learn that, at that time at all events, the tower had passed out of Celtic hands, if they ever had possessed it, for it is

¹ The "Orkneyinaga Saga," p. cxi.

impossible to suppose that a shipwrecked crew could obtain possession of a tower that had been built to defy the Norwegian power, and *ex hypothesi* had done so for centuries. It does not, however, follow from this that it was uninhabited, on the contrary, from the context it seems more probable that Bjorn was the guest of the owner of the tower than that he could have celebrated his marriage and lived comfortably throughout the winter in a deserted ruin. Be this, however, as it may, the second occasion on which Mousa is mentioned is somewhat similar to this: In 1150 A.D. Eilend Ungi carried off the mother of Earl Harold, and took refuge in this Broch, and successfully resisted all attempts of the Earl to capture the tower either by active force or by blockade.¹ On neither of these occasions is there an epithet or hint that this tower had ever belonged to the Celts or any other foreign people; on the contrary, it seems to be assumed as the most natural thing in the world that the Northmen should take refuge in this tower, and on both occasions they showed at once that they perfectly understood its peculiarities and availed themselves of them with complete success.

Every form and every historical indication seems to me to point to the fact that this Broch, at all events, was erected by the Northmen, and not by the Celts; but its circumstances may be exceptional, and it will not, consequently, be till we have examined the whole group of Brochs existing in the Shetland Islands that we can form a definite opinion on the subject.

According to Mr Anderson, the sites of 75 Brochs can still be traced as existing in the Shetlands, and according to his map in the fifth volume of the "Archæologia," on which I implicitly rely, all these, with one or two unimportant exceptions,² are, like that on Mousa, placed on the sea-shore. Some are on promontories, some in bays or fiords, but all easily accessible from the sea. The first presumption therefore undoubtedly is, that they were erected by a people whose business was on the great waters; and unless they belonged to a race of fisher-

¹ The "Orkneyinaga Saga," p. 161.

² As far as I can make out, two are situated about one mile from the shore; but in the map the scale of the Brochs is so much exaggerated in order to make them conspicuous, that it is difficult to be precise.

men, which, I presume, nobody will contend they were, their owners must either have been merchants or pirates. They could not have been an agricultural people, at least it does not seem possible to assign any reason why they should have left their farms and possessions in the interior to seek localities on the shore, where they were singularly exposed to the attacks of the only enemies they dreaded, and who, it is admitted, had during the Broch period complete command of the sea. The only thing at all analogous to this, that I am aware of, is the position of the Oppida of the Veneti, which, we learn from Cæsar, were situated on promontories along the shores of the Morbihan, in Brittany. He further tells us that when pressed by attacks from the shore, and no longer able to resist, they embarked with their property in their ships, and sought some other "Oppidum" where they might renew the struggle.¹ The conditions of the problem here, however, are exactly the reverse of what we find in the Shetlands. The Veneti were a maritime people possessing large ships with leather sails and chain cables, who did not fear to cross the Channel to Cornwall at all seasons, and who had complete command of the sea till after a very severe struggle the Romans wrested it from them.² The attacks on the Oppida were also from the land, and this mode of defending themselves was reasonable, and would have been successful had the Romans not been able to destroy their fleets. The Celts in the Shetlands had, on the contrary, nothing to fear from the land; and the enemies against whom, on the Celtic theory, the Brochs were built to defend them, had complete command of the sea, so that when pressed they had no possibility of escape in that direction. All the possessors of the Brochs could do would be, on the appearance of a hostile squadron in the offing, to dive into their towers like rabbits into their holes in a warren, and close their doors and wait in patience till the danger was past, leaving their crops, their cattle, and their country at the mercy of a single ship's crew. It need hardly be said that no such system of defence has been attempted by any other people in any other country or age, for the simple reason that it would have been so ludicrously ineffectual. No two Brochs being situated near enough to each other to afford any mutual support, a single ship's crew was at liberty to direct its whole energies against any one at one time without fear of interruption. All they had

¹ "De Bello Gallico," iii. 12.

² *Loc. cit.* 15.

to do was to carry a few slabs of schist 3 or 4 feet long, and, placing them across the doorway, to heap behind them a pile of stone so heavy that the inmates could not push them away, and might then have left them to starve when their provisions were exhausted. A single crew, carrying with them the materials for forming a *testudo* sufficiently strong to resist the impact of stones thrown from above, might in this manner have hermetically sealed up all the Brochs in Shetland in a very short time. Indeed, one of the first elements of defence by Brochs is that the people to whom they belong shall be masters of the open country. They are absolutely useless for active defence by sorties or by combination; and though nearly perfect for passive defence, they are consequently so easily blocked and blockaded, that unless they are relieved by their friends outside, starvation is the inevitable fate of their garrisons. So self-evident doth this appear, that unless the owners of the Brochs had felt they could command access to them and be able to carry succour to their imprisoned friends before hunger pressed them, they certainly would have grouped their towers together for mutual defence in some secure and appropriate position—in other words, have adopted a mode of fortification more like that of other people all the world over.

So far is this from being the case in Shetland, that no two Brochs are situated within a mile of one another, some are two, some three, and in one or two instances a Broch is so situated that its nearest neighbour is five miles away, and they are dispersed in this manner throughout the whole group of islands from Burrafiord, in the extreme north, to Sumburghhead, the southern headland of the islands. The only mode in which it seems possible to account for this singular dispersion of these towers is, that they were erected not only to protect their inmates and their property against a hostile, half-subdued people, but to hold the land around them, which, as at Mousa, was indispensable not only for the comfort of the possessor of the tower, but for the maintenance of his retainers. The possession of the tower was, in fact, the title by which the land around it was held, and it was mainly for that purpose that it was erected. In short, the only inference that seems to be possible from a careful study of the mode in which the Brochs in Shetland are situated is, that they were not erected to defend the islands from an external foe coming from the sea, but by a people possessing command of the sea, to hold a con-

quered country against the restlessness of its imperfectly subdued aboriginal inhabitants. For the first purpose they were absolutely worthless; for the second, better adapted than any other work of this class I am acquainted with.

If, however, the local circumstances tell heavily against the theory that the Brochs in Shetland were built by the Celts, the historical facts seem equally difficult to account for on that theory. We may, I fancy, assume as a matter of course that there were no Brochs on these islands till the visits of the Northmen were so frequent, and their intention to settle there so evident, that the inhabitants were roused to take some measures to protect themselves, and to prevent their country being permanently subdued by these warlike rovers. To effect this we may assume they built four or five brochs—Mousa probably among them—and after some years' experience these being found to be effectual, they determined on the erection of the 70 others; not at once, of course, for the erection of a Broch in a sparsely inhabited country, and where there was no wood for scaffolding, is a serious undertaking, and the 70 would probably take as many years to complete. But what were the Northmen doing in the meanwhile? They were certainly very unlike any other conquering race we know of if they sat still and saw a race they could, and did afterwards conquer, quietly erecting fortifications to debar them from the possession of the coveted land. All the Brochs being situated on the shore, nothing was so easy as at any time to send a boat's crew to drive away the workmen and to throw down the unfinished walls, which had no defensive power till complete. They certainly would have let the Celts understand that any one building a Broch with the intention of keeping them off the land would, if caught in the act, be hung, drawn, and quartered, and his family sold into slavery. But instead of this, we are asked to believe they stood quietly by while the 70 Brochs on Shetland were completed, and the 300 or 400 in different parts of their dominions were erected, without their ever interfering to prevent them.

If the Northmen were thus supine, all that can be said in their excuse is that their indifference was fully justified by the result, for there is no reason for supposing that the existence of the Brochs retarded the conquest of either the islands or the mainland of Scotland for a single hour. In no Saga is there a hint that any Northmen ever condescended to besiege

a Celtic chief in his Broch. No bard ever composed a couplet in honour of the brave defenders of one of these towers, and no Papa ever muttered a moan over the faithful of his flock who had been slaughtered by the pagans for daring to defend their fortified posts against the northern invaders. In fact, neither in history nor in tradition are the Celts ever mentioned in connection with these towers, either as their builders or their defenders. Still they could have been no mean people who built these 400 towers and spread them over so vast a space; and if they were the Celts, it is strange they left their country to the invaders without fighting a battle worthy of being recorded, and resigned their fortifications without ever standing a siege.

All this appears to me so singularly improbable that I prefer infinitely the belief that the fashion of building Brochs arose from the fact that the north of Scotland was not conquered by either a regular army nor by a royal fleet from Norway, capable of completing it at once and establishing a regular government, but from the fact that it was accomplished gradually by buccaneers, each of whom had not only to conquer but to hold the estate he coveted, and to do that by the prowess of his own right hand, thus giving rise to what may be called an infinity of Broch tenures. With the establishment of a settled government the necessity for the maintenance of the Brochs passed away. Some were converted into farm houses by a process usually called secondary occupation, the materials of others were utilised in the construction of neighbouring buildings, but the bulk of them, as would naturally be the case under such circumstances, were merely deserted, and left to crumble, without violence, into decay from natural causes.

Besides the local and military consideration just alluded to, which seem so clearly to indicate that the Brochs were built by the Northmen and not by the Celts, there are others, of a political nature, which seem to point as distinctly in the same direction. According to the Celtic theory, there must at one time have been some 70 or 80 coequal and contemporary chiefs—a Celtic republic without any paramount chief or kinglet among them. At least, no hint of any such potentate is found either in history or tradition, and no trace of Dun or Cathair is found on the islands where he could have held his court, or where the chiefs could have assembled either to enact laws or settle their disputes, or even at annual fairs to

exchange the produce of their lands or of their industry for arms or other products they themselves were incapable of manufacturing. The extensive mounds at Tara, Ailceach, and Emania, and elsewhere, which still remain, sufficiently attest the political organisation of the Celts in Ireland in early ages; and the Dun on the banks of the Ness, which was inhabited by King Bruide when he was visited by St Columba,¹ is a perfectly intelligible form of fortification. Its remains are still to be seen on a narrow neck of land called Craig Phadric, the summit of which is enclosed by a stone wall some 240 yards in extent, within which there is ample room for the palace of the king, probably of wood, and for the huts of his most immediate followers. It is in fact just such a fortification as we would expect such a king to erect in such a situation, in his stage of civilisation, and just such as one would expect to find in Shetland had it been inhabited by a people of the same race and with similar political institutions. Nothing of the sort has, however, been found there, nor, so far as I know, in any of the counties where the Brochs are found.

In like manner Dun Aengus, Dun Conor, Dun Oenacht, and the other forts which the Celts erected in the isles of Aran, on the west coast of Ireland, to defend themselves against either foreign invaders or their enemies from the mainland, are all fortifications of the ordinary types, designed on principles adopted by all nations, and perfectly intelligible to all.² They are, however, essentially not Brochs, and are in fact constructed on principles so diametrically opposed to the Broch system that the two must have been designed for totally different purposes. Few, I believe, will dispute the fact that the Irish Duns were erected for purposes of defence by the ordinary means, which are easily understood, and for which they are admirably adapted. It consequently remains for some one to suggest some other purpose for which the Brochs were erected; for if it were not by the Northmen, to hold the half-conquered land as above suggested, it still remains a mystery. They are so unlike any other fortifications in any part of the world.

At present the only place in Shetland that can be called a town is Lerwick. From its central position and the excellence of its harbour,

¹ Reeves' "Adamnan's St Columba," p. 151.

² "Notes on Irish Architecture," by Lord Dunraven, 1875, pp. 1-12.

sheltered as it is by the isle of Bressay, it probably was a town before the Northmen thought of settling in these islands; and had the Celts been actuated by the same motives as other people, when they found their visits troublesome and the intention of conquering the country manifest, their first care would have been to fortify their capital. What property they had most worth protecting must have been found there, and there alone were a sufficient number of inhabitants collected together to offer anything like a successful resistance to the invaders. But though it probably was and remained throughout the Norwegian times the commercial capital of the country, no attempt seems ever to have been made to fortify it, and for very obvious reasons. Had it been surrounded by walls, its Celtic inhabitants might, during the absence of the Normans, have overpowered the feeble garrison they had left behind, and closed the gates against them on their return. They might, in fact, have found themselves in the same difficulty that we were in during the Indian mutiny, when the rebels got hold of Delhi and nearly deprived us, for a time at least, of our hold on India. The Northmen were wiser; they left the town open, but they erected at a distance of a mile from it the largest and most strongly-fortified Broch in these islands. Not only is the Broch at Clickemin 17 feet more in diameter, and with a court 10 feet wider than that at Mousa, but it is situated on an island in a small loch which can only be approached by a causeway 140 feet in length, and the whole island is covered by outhouses and fortifications extending 150 feet north and south, and 154 east and west,¹ thus affording accommodation for a very large garrison in a perfectly impregnable position. It thus occupies a position precisely analogous to that of Fort-William with reference to Calcutta, or Fort St George relatively to Madras; but with the same advantage as compared with the last, that it has a perfectly independent communication with the sea, which could not be interrupted by the townspeople even if they were to attempt it. Clickemin was, in fact, designed to keep the urban population in check, just as the smaller Brochs dispersed over the country prevented any possible rising of the rural Celts, and with the smallest possible garrison enabled the conquerors to retain their hold on the country.

¹ These particulars are of course taken from Sir H. Dryden's description of the Broch, "Arch. Scot." vol. v. pp. 200 to 207, pts. xvii. to xx.

The truth of the matter seems to be that the conquest of the north of Scotland by the Norwegians—"si magna licet componere parvis"—resembles in all essential particulars our conquest of India. In both instances it was by a less numerous, but more warlike people, having the command of the sea, gradually subjecting the native races to their sway. We have fortified certain points on the coast to keep our communications open, and if we had compelled the servants of Government up the country, and planters, to fortify their dwellings, the mutiny could never have made head, and the agony of the small house at Arrah would never have occurred. As it is, our neglect of the Broch system nearly cost us our empire there, and may be the cause of our losing it any day, if another insurrection occurs under more favourable circumstances. The Northmen appreciated more clearly the true use of fortifications. Not only did they prevent the natives from having any Cathairs, or fortified enclosures, but they studded the land with numerous fortified posts, easy of access and capable of indefinite resistance with the smallest possible garrison, but of absolutely no value to the natives if they fell into their hands. By this means without any standing army, and though occasionally their numbers, from their avocations, were very much reduced, they held the conquered country without a struggle till their increasing numbers and improved organisation enabled them to dispense with these fortifications, which then fell into desuetude and decay.

It may be from want of knowledge, or of imagination, but turn and twist it as I may, I cannot conceive any circumstances under which the Brochs in Shetland could have been built by the Celts, or under which they could have been of any use to them if in their possession. On the other hand, if built by the northern invaders, the motives for which they were erected, and the purposes which were successfully accomplished by their aid, appear to me distinct and obvious, so much so that I cannot for one moment admit that the testimony of a few bits of bone or of rude pottery of very doubtful origin can be allowed for one moment to weigh against the testimony, local and political, just brought forward. If any one likes to argue from these doubtful relics that they must be Celtic, we have no common ground to stand upon. I am quite content to rest this part of my argument on Mr Anderson's distinct statement, that, "judging from the general character of their included remains, the people who lived

in these towers possessed a considerable degree of civilisation. There is abundant proof that they were not only expert hunters and fishers, but that they kept flocks and herds, grew grain, and ground it by handmills, practised the art of spinning and weaving, had ornaments of gold of curious workmanship, and were not unskilled workers in bronze and iron, &c. ;” and he adds in a note, “no flint arrowheads, or flint celt, or polished stone axe, or perforated stone hammer has yet been found in a Broch.”¹ Whether this description is more applicable to the Norwegians or to the Celtic inhabitants of these islands, either then or indeed down to the present day, I must leave it to others to judge. To me this testimony in itself seems fatal to the claims of the Celts, and when coupled with the circumstances stated above, leaves no doubt in my mind either as to the age or use of the Shetland Brochs.

Having said so much about the northern group of Brochs, a very few words will suffice to dispose of all the rest. If what has been said above is sufficient to prove that those in the Shetland Islands were built by the Norwegians, all the rest are so similar in construction and position that it follows as a matter of course that they were erected by the same people ; while, on the other hand, if the arguments above adduced are not sufficient to prove this, nothing, I fear, that I can say will obtain an opposite verdict, and it is needless to attempt it. There certainly is nothing either in the construction or in the situation of the 70 Brochs, whose foundation can still be traced in the Orkney Islands, which indicates any difference either in their age or use. Like the Shetland group, they are all situated on the sea shore, with the exception of five or six which are found at a distance of from one to two miles from the water’s edge. All these exceptionally situated Brochs are clustered together at distances not exceeding from four to five miles from Stenness, where all the principal rude stone monuments and tumuli are found.² The first inference to be drawn from this is, that the neighbourhood of the loch of Stenness was a more favourite resort of those who erected the Brochs, whoever they were, than any other part of

¹ These statements, like those referring to the Shetland Broch, are derived from Mr Anderson’s map of the distribution of the Brochs, in the fifth volume of the “*Archæologia Scotica*,” p. 198.

² “*Orkneyinga Saga*,” Introduction, p. ex.

the island, and though it may not be sufficient to prove the case, it certainly raises a very strong presumption that all the monuments belonged to the same people. Otherwise it is difficult to understand why the Broch builders left all these remains of another race standing undisturbed, and did not utilise them for their more utilitarian structures. It is, indeed, as difficult to understand this as the fact,—too much overlooked in this controversy,—that if the Brochs were built by the Celts, we have now existing the remains of 400 or 500 fortified dwellings of the inferior and conquered race, but not one trace of the dwellings, or temples, or tombs of the superior and conquering people, not one at least, that could have been erected before their conversion to Christianity in the eleventh century. I cannot conceive this possible, but as others do not see it in that light, its bearing on the age of the Brochs is so slight that I shall not attempt to argue it here.

As in the Shetlands, there is no trace of a Dun or Kaer, or fortified enclosure, in the Orkneys, where a chief could have resided, or where the natives could have assembled for mutual defence, or to resist an invader. According to the Celtic theory, they preferred, as before mentioned, a mode of defence different from that of any other people in any part of the world, and so far we can judge so opposed to all principles of common sense, that it is little to be wondered at that it was found so inefficient when brought to the test of experience.

The disposition of the Brochs on the mainland is somewhat different from that found in the islands. The greater number of them are not on the sea-shore, though many are, but are situated frequently at distances of several miles inwards, some ten and even fifteen miles from where they could be approached by ships. Still their disposition can only, I conceive, be accounted for on the supposition that they belonged to a people who, basing their scheme of conquest on the sea, first made their footing sure by building towers on the shore and fortifying point after point, as they crept up the straths or occupied strategical points further inwards. From the great number of them—79—found in Caithness, and the mode in which they are located, we may gather that the natives were more numerous and more difficult to keep in subjection than those in the islands, and also that there was more to be feared from their combining with the inhabitants of neighbouring districts. Yet both from their

disposition and construction they are evidently aggressive, not defensive works. Most numerous near their base on the coast, or creeping up the straths and valleys, but gradually thinning out, till in the neighbourhood of Loch Shin they can only be regarded as the outposts of the invading army. Still if the Norwegians ever possessed or settled in this country, it could only be in fortified dwellings, capable of being defended by the smallest possible numbers, that they could have existed or held their own in these remote situations among a hostile population. Their out-houses or farm buildings may have been of wattles or of turf and stone, and have disappeared, but it was indispensable that the hostile possessor of the land should with his family be protected by some such permanent building as these. Had they, on the contrary, been defensive buildings, as we must assume they were intended to be if erected by the Celts, a totally different system would have been pursued. The principal group would certainly have been in some strong central position in the interior favourable for defence. The natives might in that case have pushed their Brochs as outworks towards the shore, to resist a landing—though singularly unsuited for that purpose—and have connected these shore works by a chain of posts to retard the advance of the invaders towards the interior; but when these were taken, they must have had some fortified central position to fall back upon when pressed. If they had not, their attempts at defending these isolated outposts would have been devoid of common sense, and exactly the contrary of all the principles of defence adopted by any other people. It need hardly be added that no such fortified position exists anywhere in Brochland.

These considerations may not at first sight appear so self-evident to those who have not been in the habit of studying these questions as they appear to me. It has, however, been my fate both to read and to write a good deal about fortifications and military matters of this sort; and the forms of the Brochs and their disposition appear to me so admirably adapted for aggression, and so utterly useless for the defence of a country, that I feel it almost insulting to the intelligence of my readers to insist more on this aspect of the question. There is, however, one other point of view in which the Brochs should be considered before leaving this branch of the subject.

The people who built these 400 or 500 Brochs, pretty evenly spread

over a country extending 400 miles north and south from Burra Fiord to the Mull of Cantyre, and 200 miles east and west from the Dornoch Firth to Harris, whoever they were, must have been a singularly homogeneous and united people, if we may judge of them from their works. Had they been Celts they certainly would have been heard of on the southern side of the valley of the Caledonian Canal as well as on the north. With such a fortified basis, and possessing this organisation, they would have made Perth and Forfar singularly uncomfortable abodes; but nothing of this sort was ever heard of, and there is no record of any invasion of the eastern and southern counties of Scotland by any northern hordes of Celts: If, however, we assume that the builders of the Brochs were the Northmen, Ireland, and all the coasts of Scotland and England between Brochland and the south, can tell a fearful tale of their ravages during the whole period within which, it is assumed, the Brochs were built. Even France was not free from them, for they conquered some of her finest provinces; and Scotland felt their power down to the time at least of the battle of Largs (A.D. 1263), though that was at a time when the Brochs had ceased to be inhabited, having been superseded by the more regular government of the Jarls, though that was based on the foundations laid by the Broch-building Vikings.

Secondary Occupation.

As I believe all arguments as to the origin and use of the Brochs must ultimately be decided on military considerations such as those brought forward in the preceding pages, it hardly seems necessary to say much on such minor points as that of "secondary occupation," which has very little direct bearing on the real points at issue. As, however, it has been frequently adduced, it does not seem possible to pass it over completely in silence.

So far as I can understand it, there are four forms that the argument may take. First, that the Brochs were built by the Celts, and when they were found to be of no use for their purposes, or ceased from the change of times to fulfil the original condition for which they were erected, that then the Celts added those outhouses and divisions which are called evidences of secondary, but which in this case ought to be considered as of continuous, occupation. It is a perfectly logical and by no means

improbable conclusion to draw, if it can be proved that the Brochs were originally erected by the Celts. But even then it is hardly likely that the Norwegians when they conquered the country and drove the Celts from their fortifications would have allowed any of them to remain standing and in their occupation. It is far more probable they must have made a clean sweep of the whole, and not to have allowed them to surround their old towers with outworks which, for anything they knew, might eventually have been turned against themselves.

A second hypothesis is that they were built by the Northmen, but when no longer required by them for purposes of security that these deserted ruins were occupied by the subject Celts, and that their keeps were then altered to suit their new inhabitants, and the outhouses added to afford them the accommodation they required for their more peaceful purposes. This, though really a case of secondary occupation, appears to me equally improbable. It must have been so much cheaper to have utilised the same amount of material, in forms more suited for modern purposes, and the results so much more convenient, that this mode of utilising them is hardly likely to have been adopted. Besides, though ceasing to be actually inhabited by the Northmen, these towers, if built by them, were the symbols of their power, and the titles by which they held the lands in the centre of which they stood; and it is hardly probable they would have ceded possession of them to an alien though subject race, till at least a time far more modern than these secondary additions indicate, and when title-deeds on parchment had superseded more material evidences of possession.

A third hypothesis, that they were built by the Celts but afterwards occupied by the Northmen, seems even more untenable; for we can hardly fancy the conquering race condescending to occupy buildings belonging to the people they had just subdued, and who, if from that cause alone, they seem always to have despised. Besides this, any works the Celts might have erected and designed for the defence of their country against a foreign invader must always have been unsuited for the purpose of another people who we may assume were trying to conquer it, and to hold it with the fewest possible men till such time as an organised government could be established sufficiently powerful to hold it, without fortifications, against their own native subjects, and to protect their own people against any

rising of the subject races. Under these circumstances it seems hardly possible that the Brochs could have served the purpose of the two peoples, or at any time have been occupied by one after the other.

We seem thus driven into accepting a fourth hypothesis, which has at least the merit of being a usual one, and occurring everywhere else. It is that the Brochs were erected, as explained above, by the Northmen for the purpose of protecting themselves against the Celts and holding the country they were gradually wresting from them. Nothing appears more natural than that when under the Jarls the subjection of the country became so complete that personal security could be guaranteed, that their old attitude of defence should be abandoned, and the Brochs either allowed to go to decay or were so modified as to suit the altered condition of the country, when the warlike Viking was enabled to forsake his wandering piratical life, and became a peaceful Udaller. Then if the old tower which he and his ancestors had long occupied was pleasantly and conveniently situated, there was no reason why it should be abandoned, if by alterations and additions it could be made suitable for the altered circumstances of the times.

Any one who knows Scotland can call to memory hundreds, it may be thousands, of fortified mansions belonging to the Middle Ages which have in more peaceful times been modified to suit the purposes of their present inhabitants. Those which were situated on cliffs or inaccessible places have generally been abandoned, like the Brochs, and left to crumble into decay; but those that have been situated in fertile or convenient situations have been so altered and added to—like the Palace at Holyrood—as to be hardly distinguishable. Others have been furnished with wings, and smothered up in additions to a greater extent than even the Brochs of Lingrow or Yarhouse quoted by Mr Anderson (“Proceedings,” 334–36), and bearing about the same relative likeness both in plan and in construction. Continuous occupation by the same people indeed seems to me the only reasonable solution of the difficulty, and the only one in accordance with the facts as at present known. There may be instances in some parts of the world of one race, like hermit crabs, occupying the deserted dwellings of another and a different race, but I do not know of them, and till they are brought forward must be allowed to adhere to the doctrines of continuous occupation by the same race, which appears to me to account

perfectly for all the phenomena of the case as at present known. If this is so, that race was undoubtedly that of the northern invaders, who certainly—it I am not very much mistaken—originally erected them.

These remarks on the Brochs have extended to a length so much greater than I intended, that it is not my intention, at present at least, to discuss the relative age of the stone circles or chambered tumuli or other rude stone monuments that are found in connection with them. In my previous publications I have already said all that I care to say regarding them.¹ The Brochs are so essentially the principal and governing class of erections in that country, that whoever built them may fairly claim to be the authors of all the rest. If they are ascribed to the Norwegians there is no difficulty in the matter—they remained pagans down to the eleventh century, and as such may very well have erected the megalithic circles, either to mark battle-fields or to enclose the spots where those who fell in battle were buried; and the tumuli are only a continuation of thousands of similar monuments which in pre-Christian times were raised in honour of the dead in all the countries of Europe and of Asia.

The case would, however, be different if the Brochs were ascribed to the Celts. We know that being Christians they did erect certain rude cells or oratories which are found dispersed all over the northern islands. These have been partially described by Captain Thomas in the fifth volume of the "Archæologia Scotica," and more in detail by Mr Muir in his "Characteristics of old Church Architecture in Scotland and the Western Isles." They are as rude as any buildings ever erected for sacred purposes in any part of the world. Such erections as Teampull Sula Sgeir, or Teampull Rona,² are both in design and construction infinitely inferior to such a Broch, for instance, as that of Mousa, and are not to be mentioned in the same category, with such a tomb as that of Maeshow. Centuries must have elapsed and enormous progress have been made before the builders of these rude Christian edifices could even have conceived anything so grand as some of the larger Brochs, or anything—both artistically and constructively—so perfect as Maeshow. Yet even these rude cells could not have been constructed before the conversion of

¹ "Rude Stone Monuments," pp. 241-257; "The Brochs," &c., p. 25, *et seq.*

² Muir, pp. 195, 205.

the Celts to Christianity, A.D. 563-597.¹ And, even assuming that they progressed sufficiently in the succeeding centuries to build the Brochs, being Christians, they certainly did not require the tombs nor the circles, the erection of which shows a degree of mechanical skill very much greater than that found in the early Christian oratories. Consequently, if these were erected in the seventh or eighth centuries, Maeshow could hardly have been attempted before the tenth. But the Celts had long before that been converted to Christianity, and only a pagan jarl could have required such a tomb.

These, however, are collateral issues, having only an indirect bearing on the main points in dispute. The great point which, as mentioned above, must never be lost sight of in arguing this question is, that the Brochs are works of fortification, and it is in consequence only when looked and examined from a military point of view that their forms can be understood or their purposes ascertained. It was, perhaps, because I had spent so much of my time and thought on questions of that nature, that it struck me so forcibly, at first, that they must have been built by the invaders and not by the defenders of the country in which they are situated. I am quite free to admit, however, that when I first wrote on the subject, I neglected to enforce this view of the case with the urgency I ought perhaps to have employed in addressing those with whom subjects connected with strategy or military engineering are not necessarily familiar, and the main object of this essay is to supply that omission. As the case now stands, I feel perfectly confident that any military engineer who will study the construction of the Brochs with sufficient care, together with their geographical distribution, must arrive at the conclusion, first, that they were not erected to defend the countries where they are found against a foreign enemy of any sort; secondly, that they were erected by some people who, in the first instance at least, had such a command of the sea as to have undisturbed access to them at all times, and afterwards such command of the lands in which they are situated as to be able to move freely among them whenever it was thought worth while to concentrate a sufficient body of men, either to succour one that was in distress or to extend the system further. The Northmen in Brochland were always in a position to do this; the Celts never were so; and it is, consequently, I

¹ "Book of Deer," Preface, p. lxxiv.

believe, to the former that the erection of the Brochs must certainly be ascribed.

It will be time enough to discuss the bearing of M. Lorange's researches on our present subject when these are published, with plans and illustrations sufficiently extensive to make them intelligible. At present, so far at least as I have seen, they are only known through verbal descriptions, capable of the most diverse interpretations—as all mere verbal descriptions of antiquarian and architectural objects must necessarily be; and it is probably from this cause that Mr Anderson takes so different a view of their bearing and importance from that which I have adopted. It is not, however, worth while stopping to inquire who is right in this matter, as their bearing on the age and use of the Brochs is absolutely nil, and they throw only so dim and uncertain a light on the age of the sepulchres in Scotland, that it would be a waste of time trying to ascertain what this amounts to, till we can do so with better prospects of success than the present very scant materials afford the means of attempting. Meanwhile, however, there is a class of sepulchre in Scandinavia which does appear to have a direct bearing on the subject, but which has been too much overlooked in this controversy, while as I happen to have woodcuts

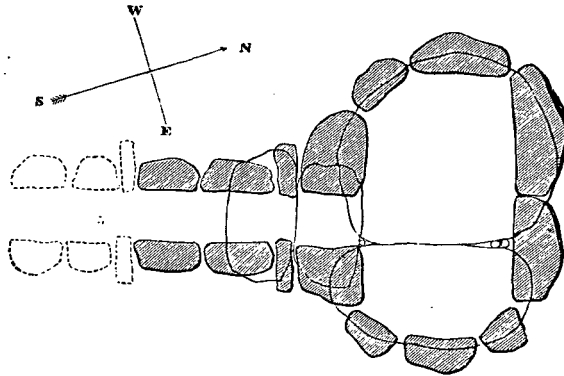


Fig. 1. Dolmen at Uby. Ground Plan.

of several of them by me, it may interest the Society to have them as a means of comparison.

They are generally known as *gang graben*, or, as Sir John Lubbock translates it, "passage graves,"¹ and are, I believe, numerous throughout Scandinavia, though they have not yet been illustrated to anything like the extent they might be. One found at Uby, in the isle of Zealand, is a fair specimen of its class. It consists of a chamber of an elliptical form (fig. 1), measuring 13 feet by 8, and with an entrance gallery 20 feet in length.² As will be observed, its walls and roofs (fig. 2), are composed



Fig. 2. Dolmen at Uby. View of Interior.

of large boulder stones, and only the packing done with smaller materials. In the Orkneys, and generally in the north of Scotland, where there are few, if any boulders, but abundance of self-faced stones, the whole would

¹ "Prehistoric Times," pp. 131 and 163, 3d edition.

² Antiquités Préhistoriques de Danemarke, p. A. P. Madsen, Copenhagen, 1869.

have been like the tombs and *eirde*-houses constructed with flat stones, the roofs being formed by approaching stones forming false arches. That peculiarity, however, arises wholly from the difference of material in the two countries, not from any difference in age or use. Another example (fig. 3) is from Axevalla, near the Wener Lake, in Sweden.¹ It consists

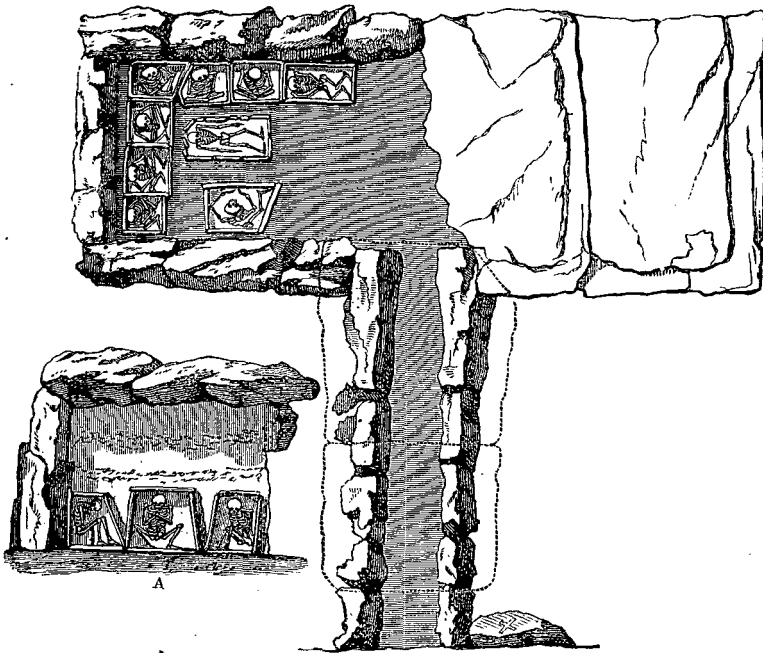


Fig. 3. Sepulchre at Axevalla.

of a single apartment 24 feet by 8 and 9 feet high, with an entrance in the centre of one side. In many respects the tomb resembles that known as Kevik's tomb (fig. 4),² near the southern extremity of Sweden, which is generally assumed to be connected with a battle fought there by Ragnar

¹ Sjöborg's Samlingar För nordens fornälskare, vol. i. pl. 7.

² Sjöborg, vol. iii. pls. 9 and 12.

Lothbrok in A.D. 750. These again are connected with a dolmen at

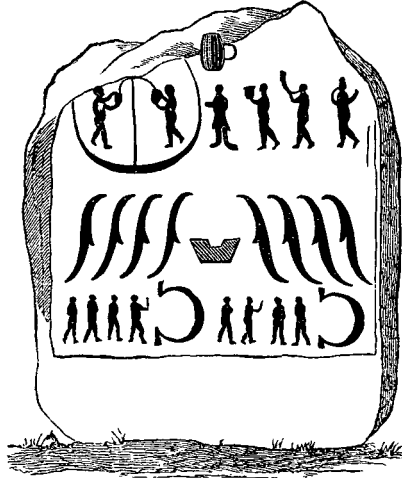


Fig. 4. Head-stone, Kevik's Grave.

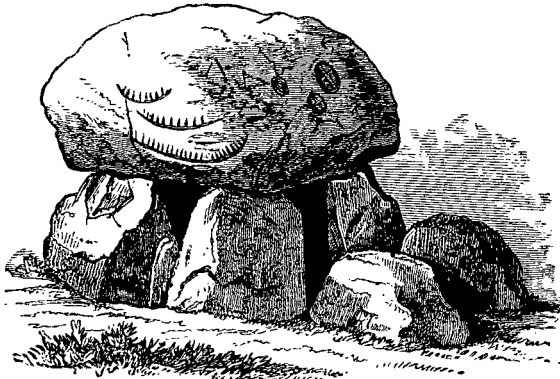


Fig. 5. Dolmen at Herrestrup.

Herrestrup (fig. 5) in Zealand,¹ which, when dug out of the tumulus that

¹ Annalen für Nord. Aldk. vol. vi. pl. 10.

originally covered it, was found covered with representations of long ships and other emblems which there seems very little doubt belong to the Viking age, and which must have been put there before it was covered up, though, as that was a part of the original design, it must have been done in the same age.¹ If this is so, it lends considerable probability to the conclusion I have arrived at from other circumstances, to the effect that Mashow is a monument of the tenth century, which indeed appears to me so nearly certain that I must be excused if I adhere to it till at least something more pertinent is urged against it than has yet been brought forward.

Round Towers of Ireland.

In the second volume of the late Lord Dunraven's "Notes on Irish Architecture," so admirably edited by Miss Stokes, there is a chapter of upwards of forty quarto pages—pp. 147 to 188—devoted to an attempt to prove that the celebrated Round Towers were first erected by Irish ecclesiastics, in the ninth and tenth centuries, in order to protect themselves and their property against the attacks of the marauding Danes, as the Vikings were then called, in that country.

Whether the premises are or are not sufficient to bear out the conclusions arrived at in this chapter others must decide. To me they seem ample. But whatever the result, it is interesting, as the most successful attempt, to apply to these hitherto mysterious Towers those principles of common sense, which it is the main purpose of the preceding pages to advocate, as applied to the Scottish Brochs. The late George Petrie was the first to show the way, and my conviction is, that if the truth is ever to be arrived at regarding their origin or use, this is the path, and the only one, by which it can be reached.

It is also interesting to us, on the present occasion, for its direct bearing on the age and use of the Brochs which we are now discussing. It will of course be objected that the round towers are not Brochs. Very far from it; but neither were Irish ecclesiastics Vikings. But on careful examination, I feel confident it can be shown that exactly in the ratio in which the priest and his requirements differed from those of the warrior, do the

¹ For further particulars of these monuments, see my work on "Rude Stone Monuments," Murray, 1872, pp. 303, 311, and 313.

Round Towers differ from the Brochs ; and if any one will sit down with a pencil and pair of compasses, and try how he can best adapt the aggressive fortifications of the Norwegian invader to the defensive purposes of a peaceful ecclesiastic, he will almost inevitably arrive at something very like an Irish Round Tower. In the Broch the doorway was always on the level of the land outside, as it was almost indispensable it should be, for convenient ingress and egress in a building always used as an habitation. In the Round Tower the doorway was always raised to a considerable height above the ground—at Kilmacduach, 27 feet—thus affording an immense gain of defensive power, but at a very considerable loss of space internally, and still greater loss of convenience. The tower, however, was never meant to be constantly inhabited. It was only intended to be of use on the rare occasion of a Danish invasion or of a local insurrection ; and then only by one or, it may be, two priests, till such time as the storm blew over. The Broch had no external windows. These were, however, indispensable in the tower, which had no internal court, and they are generally arranged one on each floor ; and if there are four storeys, one window looks to each quarter of the heavens ; and there are always four at least, if not more, in the uppermost storey, where they were safest from the arrows or missiles of the attacking party. The imprisoned priest could thus watch the whole horizon, and observe and answer the signals of his friends outside, and learn when the enemy had departed, and he might safely descend. No battlements were needed—at least in the earlier towers—as the priests were essentially non-combatants, and passive resistance was all that was attempted. The Towers were, in fact, ecclesiastical safes, and were as admirably adapted for such purposes as the priests required, as the Brochs were, as above explained, for those of the Vikings, who by their means conquered and held the whole northern provinces of Scotland.

The map that forms the last page of Lord Dunraven's noble book, like Mr Anderson's maps in the fifth volume of the *Scottish Archæologia*,—so often referred to in the preceding pages,—makes the argument regarding the purpose for which the Round Towers were erected clearer than could be done by any amount of description. From it, it appears that by far the greatest number of these towers were erected to protect ecclesiastical establishments, which had been attacked by the Danes, and were conse-

quently exposed to a recurrence of a similar misfortune, though many, of course, were erected in places exposed to be attacked, but only in anticipation of an event which may never have occurred. Like the Brochs, however, besides serving the original and primary purpose for which they were erected, the towers may also have served to protect the church plate and valuables against such of their own lawless countrymen as, in a rude state of society, may not have hesitated to lay their lawless hands on even the most sacred things.

The truth of the matter appears to be that, when looked at by the light of recent researches, the Cloitheach, or Irish Round Tower, turns out to be nothing neither more nor less than a Scottish Broch, modified according to the principles of common sense, to meet the antithetical purposes for which they were employed. At the same time, it seems tolerably clear that if the Celts erected these towers all over the interior of Ireland, generally on sites as far removed from the coast as possible, in order to protect their property against the Norwegians of the Northern Sea, it was not they who built the Brochs on the sea-shore to protect the isles and their property against the attacks of the same dreaded enemy. The purposes for which the two classes of buildings were erected were as antagonistic as their forms, though their origin is the same.

Though originally erected for purposes of defence, the Cloitheachs, or Round Towers, may have been afterwards used as belfries; though it is extremely doubtful if, before the tenth or eleventh centuries, the Irish were capable of casting such bells as would be audible from their summits. Such hand-bells as we know they had would be much more effectual if rung on the ground. They may also have been used as *fanoux de cimetière*, as Mr Hodder Westrupp suggests, or as beacons, or for many other uses; but their primary purposes were those of fortification. It is by the laws of that science, and by that only, that they, like the Brochs, can be judged, and their age and uses be determined.

Looked at from this point of view, all that the late George Petrie wrote on the subject of these towers, in his "Ecclesiastical Architecture," and elsewhere, becomes perfectly clear and intelligible. But not so much so, as when studied with the aid of the concluding chapters which Miss Stokes has added to Lord Dunraven's "Notes." It would take infinitely more space than could be afforded here, to restate their arguments, with

the necessary elucidations, in accordance with this new light; and this is not the place to attempt it. Meanwhile, however, it need hardly be remarked that it must add immensely to the interest of our present subject if it can be shown—as I believe it undoubtedly can—that a proper investigation into the age and uses of the Scottish Brochs contains the key, and probably the only one now available, for the solution of the mystery that has so long hung around the origin and uses of the cognate and nearly contemporary Round Towers of Ireland.