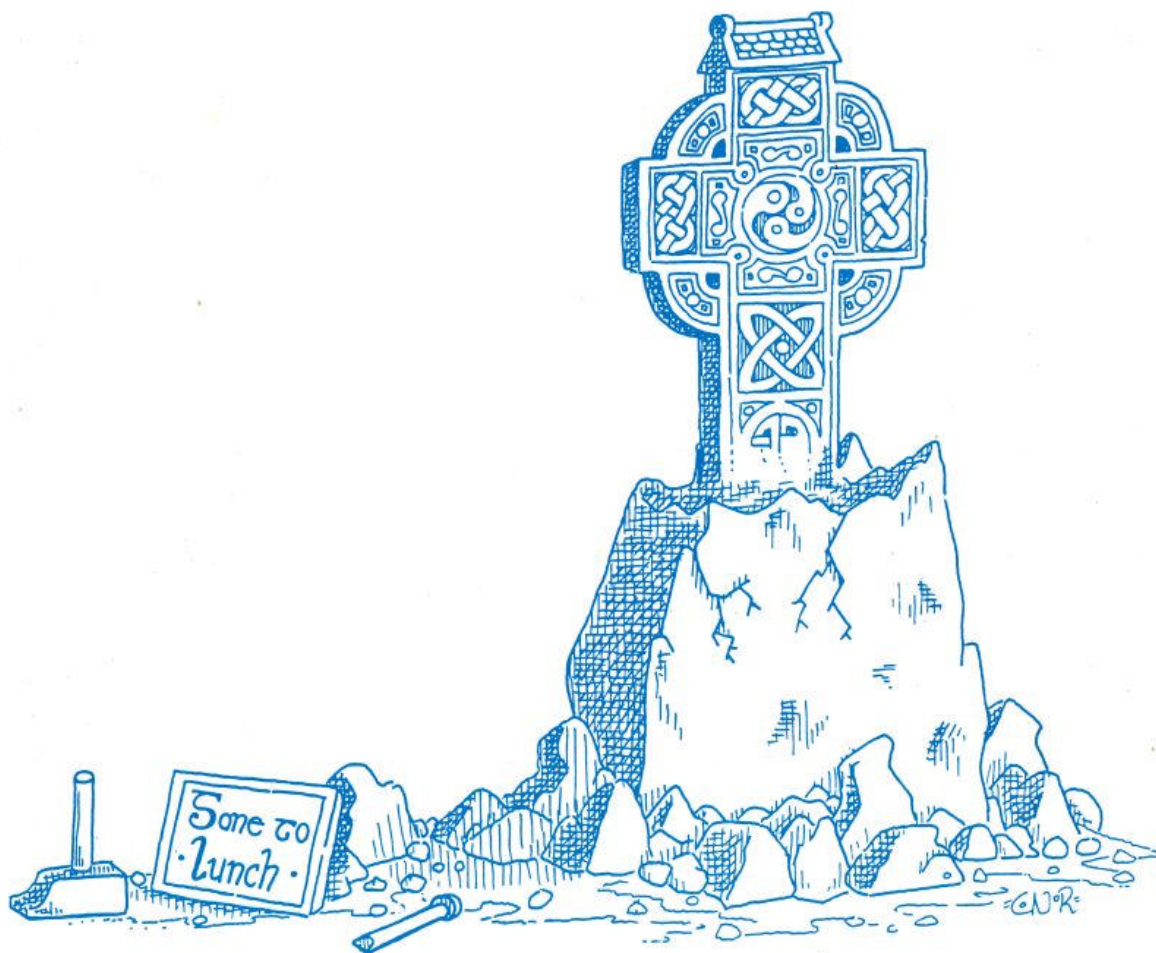


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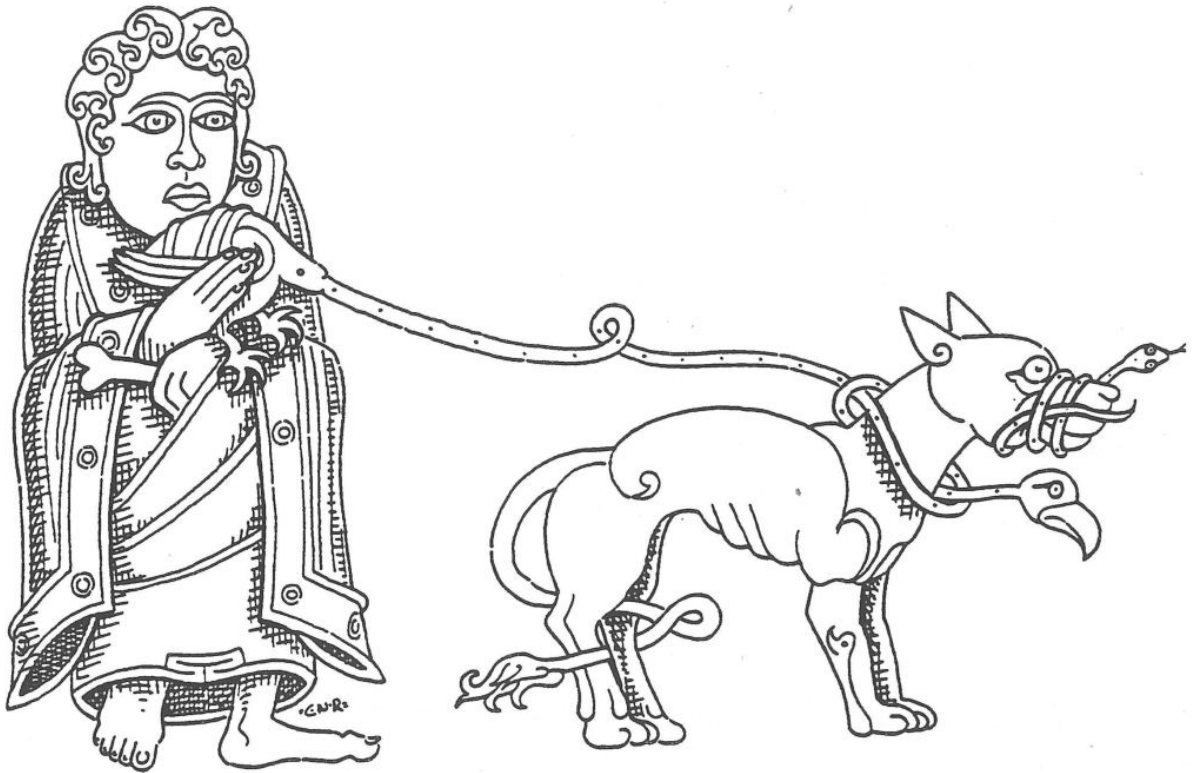
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TABLE OF CONTENTS

Contents

EDITORS' FOREWORD	3
The Redating of Ham Green Ware: some reflections in the Irish evidence	
Caroline Sandes.....	5
THE ARCHAEOLOGY OF CHAOS	
Similar Problems in Dissimilar Disciplines	
Stephen P. Johnston.....	10
Full Doorstones in Portal Tombs, precluding successive burial.....	
Edmond O'Donovan	20
The Horse and the North American Plains Indian	
Roddy Moynihan.....	28
Hagiography: a resource for the archaeologist.	
Teresa Bolger	32
THE EVIDENCE FOR TOWN WALLING AT ATHY CO. KILDARE	
Seamus Taaffe.....	38
A "Square Earthen Church of Clay" In Seventh-Century Mayo	
Cathy Swift	47
THESES	
THESES IN THE DEPARTMENT OF ARCHAEOLOGY, U.C.D.	56
M.A. theses Submitted to the Department.....	56
Theses Submitted for N.U.I. Travelling Studentships in Archaeology.....	61
M.Phil and other Theses Held in the Department	62
Doctoral Theses Held in the Department.....	62
Editors' Comment:	63
THESIS LIST	63

EDITORS' FOREWORD

We hope that this, the fourth volume of *Trowel*, will further consolidate the future of the journal. To that end editors and contributors are needed if *Trowel* is to reappear. Since 1988 the editors and contributors to *Trowel* have shown that a small budget and circulation is no impediment to quality publishing, and we feel that the same should hold for other publications in Irish archaeology.

Is it time to look again at the feasibility of publishing a journal along the lines of the now defunct Irish Archaeological Review? It seems unfortunate that there has been such a large amount of research carried out in U.C.D., and the other universities where archaeology is a subject, and yet a very small proportion of this research has been published, even partially (refer to the List of Theses in the Department of Archaeology, U.CD. in this volume). Surely a way can be found to publish the more substantive results of original research? It is strange that at a time when the process of publication is being redefined, in terms of cost and production skills needed, *Trowel* being a prime example, the wider opportunities for archaeological publication seem to be decreasing.

The format of *Trowel* has changed this year and we have introduced many of the recommendations of the Council for British Archaeology's Signposts for Archaeological Publication. We hope that this format will remain the standard one for future volumes of *Trowel*. This is our contribution to standardisation in Irish archaeology!

At present *Trowel* volumes I and III are out of print, however, due to demand a reprint of *Trowel* III is planned for the near future. It is hoped this will increase availability and extend circulation.

It is our pleasure to thank a number of people without whom *Trowel* IV would never have seen the light of day. Drs Gabriel Cooney and Eoin Grogan and Ms. Fin O'Carroll of the Irish Stone Axe Project were extremely generous in allowing us use their facilities in U.C.D., the Director and staff of the Irish Archaeological Wetland Unit also gave much appreciated assistance. We would also like to thank Ms Sinéad Crofts, the Auditor of the U.CD. Archaeological Society for her support, while Mr Conor McHale ensured that, yet again, *Trowel* has the prettiest, wittiest and most original artwork of any archaeological publication in Ireland!!

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The Redating of Ham Green Ware: some reflections in the Irish evidence

Caroline Sandes

Recently Ham Green ware was back-dated, by almost a century, due to the discovery of some medieval contexts in Bristol which could be securely dated by dendrochronology. This paper is a brief look at how this is reflected in some of the Irish evidence.

Ham Green is a kiln site on the outskirts of Bristol in Somerset. The kiln consists of an oval oven pit with an internal dividing wall and is one of the kilns that Musty classified as type 2b (Musty 1974, 44). The kiln was surrounded by a drainage ditch filled with kiln waste (Barton 1963).

The pottery was divided into three groups- jugs, cooking pots and other vessels such as lamps, meat dishes and bowls. The jugs were further divided into two types - A and B - based on fabric and decoration but there is some overlap between the two (Barton 1963, 96). The A fabric has a sandy texture with a high calcium content, and fires to a hard, and when unglazed, creamier finish than that of the B fabric. The latter has no calcite inclusions but a lot of very fine water-worn sand instead. It also fires to a hard, but grey, finish. The cooking pots tend to be oxidised to a brick-red colour (Barton 1963, 97). Ham Green ware is predominantly hand made.

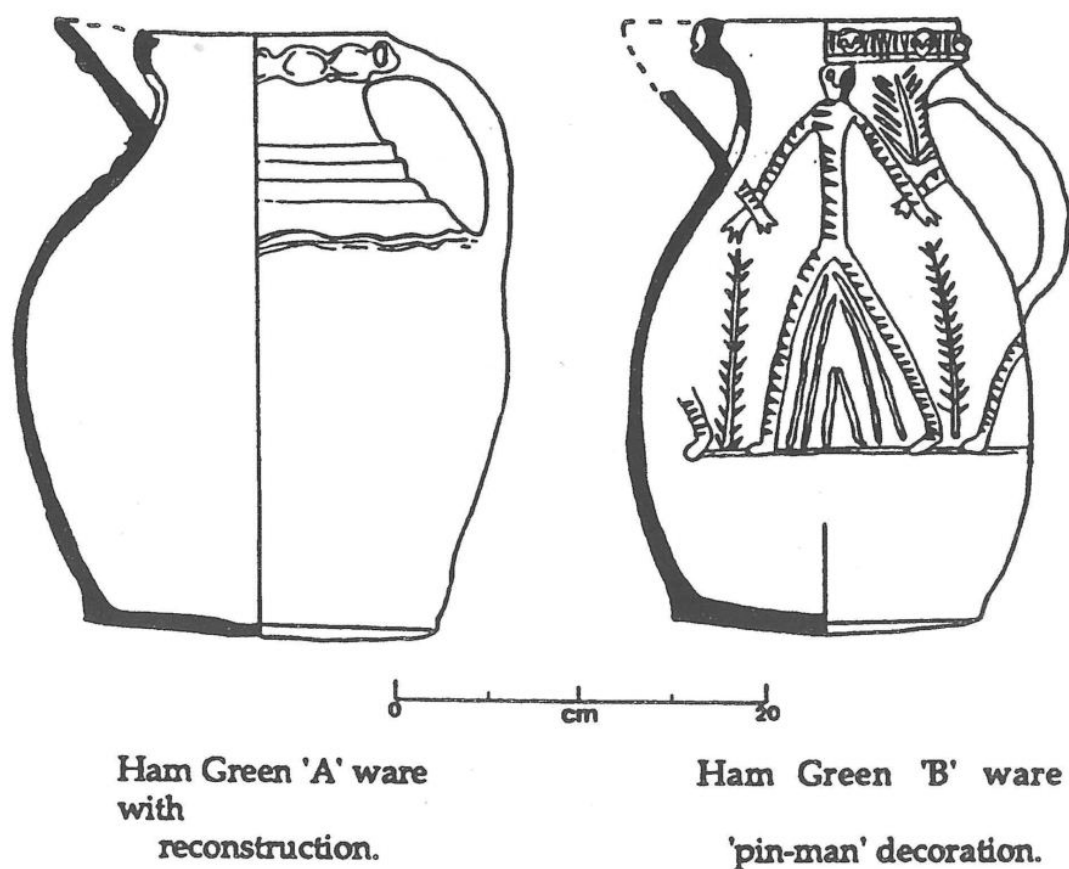


Fig.1

Type A jugs are also distinguished from Type B jugs by their form and decoration. Rilling, rouletting, applied strips and combing are seen on A jugs, whereas horizontal grooving and combing are typical of B jugs. It is also on the B jugs that applied strips in either zoomorphic or anthropomorphic designs, for example the 'pin-man' or running stag, are seen (Barton 1963,108). It was not possible to provide a date for the material from the kiln itself nor was there any apparent documentary evidence for the kiln. There had been finds of Ham Green Type A at the Saxon Palace, Cheddar, which were dated to c.1220, and of Type B at Back Hall, Bristol, in contexts dated to c.1240-1300. As a result Barton initially gave the Ham Green ware a long date range of C.1200-1300 A.D. (Barton 1963,124-125).

Until fairly recently Ham Green has not turned up in contexts that might refute this date range. At Chepstow the various different forms of Ham Green ware, including cooking pots, bowls and lamps, were found in 12th century contexts (McCarthy & Brooks 1988, 343-345). It was more recently on excavations in Bristol that a closely datable early context for Ham Green was discovered. Dundas Wharf, Bristol, revealed an oak timber waterfront from which dendrochronological dates were obtained. These spanned a period from 770 to 1202 A.D. (Nicholson & Hillam 1987, 133), and provided a mid-12th century date for Ham Green Type A jugs and cooking pots (Burchill et al 1987, 23).

On current evidence Ham Green Type A jugs appear to start c.1120. These develop, through a transition phase, when various features of Types A and B overlap, to Ham Green Type B jugs which date from c.1175, with some late jugs continuing until c.1275 (information from R. Burchill).

Ireland was not invaded by the Anglo-Normans until 1169. Previous to this, pottery in Ireland consisted of native souterrain ware, which is found predominantly in the northeast of the country. There are some imported wares from kilns such as Stamford and Chester found in 10th and 11th century contexts, and later 11th century pottery from northern France is recorded from Dublin. Apart from these, Ireland seems to have been virtually aceramic in the period immediate preceding this (Wallace 1983, 225; 1986,213).

One of the earliest sites in Ireland to produce Ham Green ware from a secure context is Rathmullan, Co. Down (Lynn 1981-2). This is a large raised rath which, although originally Early Christian, had an Anglo-Norman motte built on it. Medieval pottery, some of which had obviously been broken in situ, came from layer 14. This was directly under the motte and Lynn (1981-2, 99) argues that it must have been dropped immediately before it was built. This was interpreted as Anglo-Norman activity at this level as similar sherds were found in the primary occupation levels of the motte c.1.8m above (Lynn 1981-2, 99). Three coins also came from layer 14 which indicate a date of c.1200, or very possibly earlier (Lynn 1981-2, 65). The Ham Green ware included body sherds from a vessel with swirling lines on one corner which is possibly an A/B hybrid, a shard from part of a Ham Green 'stick-man' design and from layer 14 or 15 two sherds with an applied strip decorated with diagonal slashes of Ham Green Type B (Lynn 1981-2,124-125).

Ham Green has turned up on sites throughout the country. Where it does not turn up it is, as Sweetman points out, the exception, rather than the rule (Sweetman 1978, 156). Trim Castle, Co. Meath produced some Ham Green B ware from the remains of temporary habitations (structures L and M), and they are among the earliest stratified finds from the site. Sweetman argued that the keep was probably completed c.1220 but attributed these structures to c.1254 and associated them with the building work carried out under Geoffrey de Geneville (Sweetman 1978, 140). The Ham Green at Trim included part of a jug with a bridge spout

and decorated with regular shallow horizontal grooving with slightly deeper vertical grooves overlying the former. Also found was a body shard with an applied strip which is either a pin man or a dancing girl; it was found under the mortar layer in structure L (Sweetman 1978, 158, 160). According to Barton (1988, 282), however, Sweetman originally wanted to date this Ham Green Type B ware to c.1220 when historical sources and architectural evidence suggest the castle was first built (Sweetman 1978 128). McNeill has recently argued that the building of the keep commenced at a much earlier date of 1174 by Hugh de Lacy after his motte was destroyed (Stalley 1992, 17). Even allowing for this much earlier date, the Ham Green ware could still be associated with the original building at Trim rather than that of de Geneville.

Ham Green has turned up in large quantities on the Cork excavations of the 1970's (Barry 1987, 98) which included that of early 13th century contexts (Twohig 1974, 12). Finds, however, from contexts associated with part of the town wall at Grand Parade (Hurley 1985) included only a few sherds of Ham Green. These were of Type B and came from the lowest levels (Hurley 1985, 77). Hurley dates this context to the mid-13th century (Hurley 1985, 73). During further excavations on Grand Parade small quantities of Ham Green of Type B came from Level 5, the lowest on the site (Hurley 1989, 41). A dendrochronological date from Level 4 above this of 126219 was obtained (Hurley 1989, 34). Also from Level 5, however, was one shard of Ham Green Type A fabric, but with flint inclusions which makes it somewhat of an anomaly. On both of these sites the pottery was dominated by imported south-west French wares and later English wares such as the wheel turned Redcliffe ware - also from the Bristol region. It is apparent that by the mid-13th century Ham Green ware was rapidly going out of fashion.

Barton puts forward a date range for Ham Green of c.1230-1290 (Barton 1988, 282). He bases this on the finds of Ham Green from an excavation he carried out at Back Hall, Bristol, and published in 1960. This hall was built after the diversion of the river Frome between 1240 and 1247. The pottery he refers to came from the filling of a ditch. Most of the jugs were of Type A with very few of Type B. He argued that Ham Green Type B pottery was at its peak at this stage, and thus a terminal date of 1300 seems reasonable. Based on this he argues that 1200 is too early a start for Ham Green as this would be a very long date range, and thus he put forward a date of 1230 as more acceptable for the beginning of Ham Green Type A pottery (Barton 1988, 282). Ponsford believed that Ham Green Type A pottery had the same chronology as Type B, and believed that the lower date for Ham Green ware was c.1200 (Barton 1988, 282). The recent dendrochronological dates for Ham Green from Dundas Wharf support a date of the mid-12th century for Ham Green Type A ware (Burchill et al, 1987, 83).

The Dublin excavations have turned up a large quantity of Ham Green ware including both Types A and B jugs, cooking pots and possibly tripod pitchers; the variety of Ham Green ware in Dublin is greater than that from the actual kiln site or Bristol itself (Barton 1988, 280). Barton used the above argument to date the Ham Green material that turned up on Winetavern Street and High Street, and by comparing the locally made Dublin wares to Ham Green ware, he dates them to the same period (Barton 1988, 278). The Dublin wares, however, parallel only Ham Green Type B ware, and so Barton dated Dublin A and B wares to the late 13th-early 14th century (Barton 1988, 278). However Dublin ware pottery from more recent excavations at High Street provide a date of late 12th-early 13th century (McMahon 1991, 56). This is more in line with the documentary evidence for the presence of potters in Dublin by 1190 (Wallace 1983, 227).

The earlier dating for Ham Green ware is very much reflected in the published finds from Ireland. Ham Green Type A ware is rare in Ireland, except from, what were, major Medieval centres such as Dublin. The Ham Green that does turn up is that of Type B which, it is argued, now dates from c.1175-1250 (information from R. Burchill). This date would conveniently explain why Ham Green turns up in such small quantities on sites which date from the mid-13th century such as Cork but which are obviously large, wealthy and influential sites, and have evidence of other imported pottery. The comparative lack of Ham Green Type A ware can thus be explained: the Anglo-Normans invaded Ireland in 1169; at this stage Ham Green Type A was being replaced by Ham Green Type B and by 1200 Type B would have probably totally replaced Type A, particularly in exports to Ireland.

The Irish evidence to date fits in with the revised dating for the Ham Green pottery. In some cases the dating of sites based on the pottery evidence could possibly be revised -

for example the medieval settlement at Jerpointchurch townland. Foley dates this occupation to the mid to late 13th century on the pottery evidence, but does note that the Ham Green ware and a bronze stick pin might suggest an early 13th century date (Foley 1989,124).

McNeill was one of the first to query the relatively late dating of medieval pottery in Ireland and it can be concluded that a fresh look at the evidence could reduce the "...danger of attributing *everything* to the 13th century.." (McNeill 1981-2, 199). Wallace mentions the difficulty of assigning any pottery to the first half century after the arrival of the Anglo-Normans and asks, amongst other things, if it is due to a "... general reluctance to assign an earlier date to some of the Ham Green material.." (Wallace 1983, 227). I think his question has been answered.

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THE ARCHAEOLOGY OF CHAOS

Similar Problems in Dissimilar Disciplines

Stephen P. Johnston

Archaeology has been influenced by ideas from many subjects, but in the case of the natural sciences, has tended in recent years to make use of applications rather than theory. There are parallels between approaches to the problem of chaos in physics, and the problem of reading context-specific symbolic texts in archaeology. The realisation that complex and unpredictable phenomena can arise from relatively simple deterministic laws may have relevance for how archaeologists deal with symbolism.

Introduction:

Ideas do not restrict themselves to the subject they first appear in. Over time, if they are powerful enough, they ricochet around the academic world, having a variety of influences on a variety of disciplines, often transcending the prescribed bounds of Natural Science/Social Science/Art to nudge enquiry in a new direction, to suggest methods and offer solutions. Archaeology is no stranger to this effect, as Daniel (1975), and more recently Trigger (1989), have eloquently argued. As its earliest scientific aspirations were shaped by the principles of geologic stratigraphy, so subsequently the discipline has felt the influence of ideas from anthropology, ecology, linguistics, economics, history, art criticism and many other fields.

Frequently, ideas are not consumed directly, and it is the fruit they produce that is brought to bear - pollen analysis, Geographical Information Systems, the spectrum of geophysical prospecting techniques, all are integral elements of the archaeologist's methodological toolkit. It is the nature of our subject that we are willing to adopt the fieldwork shortcuts, enhanced data-retrieval and rapid analysis options that "hard" science offers us, faced as we are with a fragile, non-renewable data-set, with rigid temporal and budgetary constraints imposed on its recovery and interpretation.

It seems that as a discipline we have found a balance, drawing the bulk of our theoretical influences from the more familiar social, and occasionally environmental, sciences, while restricting our natural science intake to its practical applications, leaving the complexities of its mathematical ponderings well alone. If we continue to do so, we are overlooking a valuable source of new ideas. While the specific details and even concepts of modern mathematics and physics can seem largely unfathomable from our position as laymen, the methods used to address broad-spectrum problems can be instructive. It seems that archaeology's contact with the philosophy behind pure science began with Hemel and the deductive-nomothetic approach adopted by some of the early processualists, and ended with Popper's hypothetico-deductive method (Renfrew & Bahn 1991). Crucial as these ideas have been, recent developments in science can offer fresh perspectives.

In this article fundamental upheavals in physics, arising from the implications of chaos mathematics, are examined and compared with some problems current in archaeological theory, particularly some of those raised at the recent euro-TAG '92 (the annual conference of the Theoretical Archaeology Group) in Southampton. It is not the intention of the author to suggest that chaos theory as a concept has any direct relevance to archaeology. Instead it is

hoped to make use of the way in which physics has approached the phenomenon of chaos, as a guide to how archaeology might tackle some of its more prickly theoretical problems.

Science and chaos mathematics:

In his very accessible book *Does God play dice? The new mathematics of chaos* (1989), Ian Stewart develops a potted history of scientific thought which shows clearly the good pedigree of the law-seeking approach that processualist archaeologists adopted. Starting with Thales of Miletus (624-546 B.C.), who accurately predicted an eclipse of the sun, Stewart argues that scientists have attempted to reduce nature to a set of equations that can be solved in order to predict precisely how phenomena will behave at any given time. The Greeks had advanced this science to such a degree that by at least 70 B.C. they had devised the clockwork “planetary calculator” found by fishermen off Antikythera in 1900, a mechanism with differential gearing that could be used to accurately predict the positions of the Sun and Moon against the background of stars (Zeeman 1986). Through Copernicus, Kepler and Galileo, the equation-seeking paradigm went from success to success, culminating in Newton’s *Mathematical Principles of Natural Philosophy* (1687), in which he set out equations that (with the exceptions of the scales at which quantum mechanics and relativity respectively apply) still govern systems in motion. Stewart suggests that Newton’s three volume treatise carries a message that has been “...absorbed into the very foundations of our culture. That message is: Nature has laws, and we can find them...” (Stewart 1989, 7). Nature, it seemed, obeyed a relatively small set of fundamental laws, expressed as differential equations. This meant that given the state of any system at any given time, the future behaviour of that system could be uniquely determined by solving the differential equation that governed it.

As the 18th and 19th centuries progressed, determinism acquired a companion paradigm to deal with those aspects of the universe for which writing equations of motion was impractical. The behaviour of particles within a gas, for example, meant dealing with such an impossibly large number of components that it could only be examined by the statistical analysis of averaged quantities, allowing description and prediction of only the coarsest features of such highly complex systems. By the 20th Century, a system was either purely deterministic, or it was governed by “stochastic processes”, the “laws” of random behaviour.

As it transpired, things are not as clear-cut as they seemed. Some simple deterministic systems behave, after time, as if they are random. The great French mathematician Poincaré showed how a system with only three particles in it, known as Hill’s reduced model, could become utterly unpredictable. It is the nature of academia that such discoveries do not get published very often. What student would dare submit their PhD. with the conclusion “There is no discernible pattern to this phenomenon”? Random results are more often than not discarded as “...experimental error...” (Stewart 1989).

With the application of topological and logistic mapping, as well as the processing power of the computer, the existence of “chaos” became indisputable. Systems determined by several variables with differing periods are susceptible to irregular behaviour over time. The nature of this behaviour is determined by the initial conditions of the system. The mathematics behind this phenomenon are distressingly complicated (see Schuster 1984, as an example, bearing in mind that it describes itself as an “introductory text”!) but the general conclusions and implications are at least approachable.

Islam (1989, 100) provides a good summary:

“In classical mechanics it is assumed that the entire future is predictable in a deterministic system. But this is only true for linear deterministic systems. Linear systems are those that can be divided into parts, and each part studied in isolation. Not much information is lost when the system is divided. A chaotic system can be modelled with simplistic deterministic equations, yet the model cannot be used to predict the long term time evolution of the system. It can be proved rigorously that the equations of the model can predict the entire future of the system exactly and uniquely if we can specify the initial conditions exactly.”[emphasis by S.P.J]

Well, so what? It doesn't take a genius to work out that if you put different values into an equation you'll get different results. However, scientists don't use words like "...exactly..." lightly - as used in the above quotation it means "...with infinite precision...". The reality of non-linear systems is that when solving equations that describe real conditions, the solution depends with absolute sensitivity on the initial conditions (Maddox 1989, 17). The state of the system at a given time must be known to an infinite number of decimal places in order to solve the equation correctly. The smallest change in the initial conditions and the solution of the equation can fluctuate wildly. Figure 1 shows how the iteration of the same non-linear equation with two slightly different initial values can produce results that are wildly different - the so-called "Butterfly Effect" (Bown 1992, 16). This is where the real problems begin. In order to predict accurately what a deterministic but chaotic system will do over time, the scientist is required to know the exact state of every single particle in the universe that might impinge in the tiniest way on the system being studied. This is a physical impossibility. Even if it was possible to observe the data for all the particles concerned with total precision, where would this necessarily infinite amount of information be stored? The truly repeatable experiment no longer exists. This may sound like a highly theoretical situation, but it is in fact a very real problem - chaos means nothing less than an end to the ideal of a predictable universe. A down-to-earth example of the implications of this idea is the probability that meteorologists may never be able to make accurate long-term weather forecasts. The short term is relatively easily predicted, a week is possible, but to accurately predict a period longer than a week is practically impossible (Stewart 1989, 266).

It isn't hard to appreciate the kind of major paradigm shift something like chaos mathematics can produce, but what is striking is the amount of positive work it has spawned. As alluded to above, chaos had always been present in scientist's results, but due in part to the necessity of fresh research to conform to at least the most basic scientific principles, it has only recently been recognised. Knowing that the most complicated and unpredictable of phenomena can arise from the simplest differential equations has proved to be a valuable tool to the physicist. Previously unexplainable aspects of the observable universe become clear in the light of chaos. Stewart (1989) and Gleick (1987) both cite numerous examples of phenomena only understood with the advent of chaos. These include departures from the quasi-periodicity of El Nino events, the erratic tumbling of Jupiter's moon Hyperion, fluctuations in Blowfly populations, heart beat irregularities and the incidence of measles epidemics.

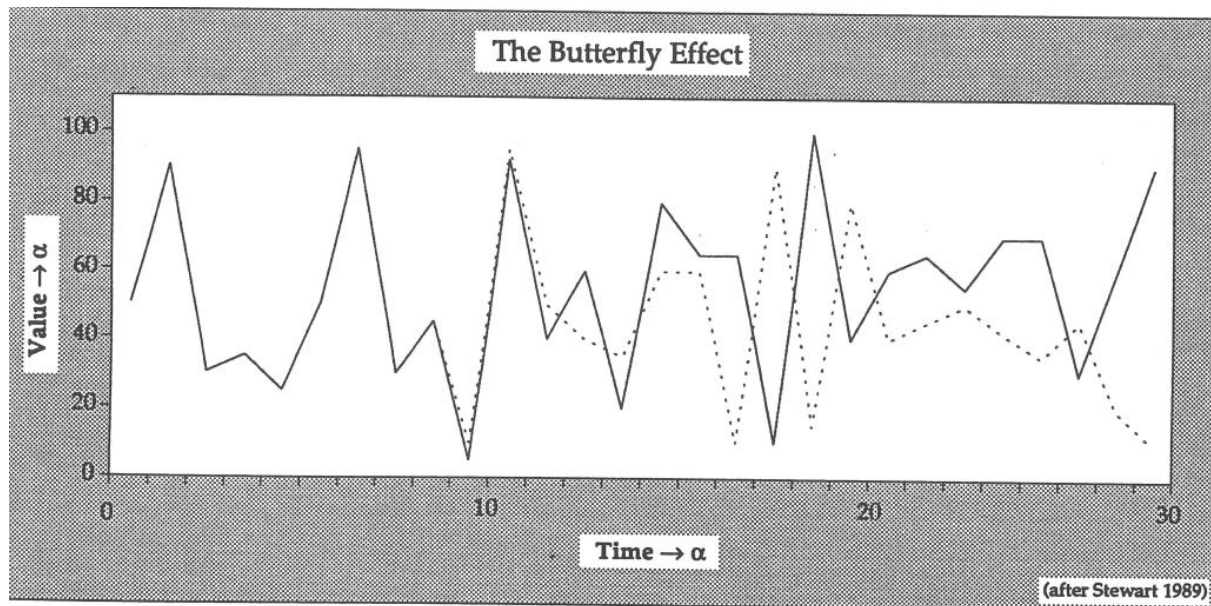


Fig 1

The key to the successful use of chaos as an explanatory tool lies largely in the consideration of the broad features of dynamical systems, their geometric attributes and periodicities, and the search for simple generative equations to explain these general properties, rather than precise modelling of the observed data. Chaos has necessitated a change in focus for the pure sciences, but ultimately has allowed a more complete understanding of the workings of the universe through highlighting the underlying structure of seemingly patternless phenomena. The loss of quantitative description has been offset by gains in qualitative explanation.

For the purposes of this article, the emergence of chaos mathematics is viewed as falling into several discrete phases. First, a period of disillusionment with the limitations of classical science for dealing with real phenomena. Second, a realisation of the existence of chaos, and its implications for physics. Finally, the present phase of gains in understanding physical phenomena through the application of chaos maths. Crudely paraphrasing Kuhnian terminology, these phases could be taken to represent periods of paradigm failure, the search for, and the establishment of, a new paradigm (Kuhn 1970). This highly stylised sequence is used as a structure for comparison with the development of the theoretical archaeology debate.

Parallels with the theoretical archaeology debate:

There are clear parallels between classical science and the tenets of the “New Archaeology”. The central idea of culture as a system, with different cultural aspects placed in a variety of discrete subsystems, is at best simplistic, and at worst wholly artificial, but has strong precedent in the classical science paradigm. The apparent value of this cybernetic approach is its ability to examine the subsystems individually, and model their interaction through feedback loops so that the iterated model approximates the system trajectory observed in the archaeological record (Binford 1962). At its most extreme it treats archaeology as palaeo-ecology, with the homo sapiens/environment relationship as the study focus. “Symbolic culture” becomes simply one more subsystem, increasing in complexity as the energy available in the cultural system increases, and humans are relegated to a passive, responsive, role in cultural change.

The driving force behind this attempt to put archaeology on a concrete scientific footing was a search for objectivity, a way of setting out logical hypotheses that could be verified, or more properly, falsified, by applying the available data to the theory. Introducing the goal of objectivity to archaeology was a major achievement of processual and functionalist archaeologies, but in practice human culture resisted conversion to mathematical models that attempted the rigid compartmentalisation of human behaviour. The acceptance of flaws in the processual approach is comparable to the first stage in the emergence of chaos maths.

The reaction against the strict neo-evolutionary stance of the “New Archaeology” was not so much a return to the normative culture history that had preceded it, as a recognition that culture is irreducible to generalised ecological principles (Bernbeck & Moeller 1990). An important aspect that processualism had overlooked was the nature and role of symbolic culture (a component absent from the hard science that processualism aspired to) in the structuring and development of societies.

Attempts to address symbolism in a scientific manner have brought out the truth of Hawkes’s (1954) concept of a “ladder of inference”. The higher that one climbs, the harder it becomes to produce testable hypotheses. The processualists had sidestepped this problem by largely ignoring that which couldn’t be addressed directly through the empirical evidence, and understating aspects of culture which they saw as not directly relevant to the food quest. In many ways this discarding of seemingly irrelevant data is equivalent to the way in which many physicists ignored the “...footprints of chaos...” (Stewart 1989, 72) in their observations. The symbolic in archaeology is not the concern of positivists because it is not open to analysis. Any statement concerning symbolic culture that moves beyond pure description, towards explanation, becomes subjective, and in doing so leaves the brief of the archaeologist concerned solely with objective truth. In reality, the kind of mental sleight-of-hand used to avoid the problem of understanding symbolic culture is far less “scientific” than any attempt to tackle it could be. Just as physicists working within the law-seeking paradigm of classical science didn’t tackle chaotic behaviour because it was not “academically sensible” to attempt to explain random results in deterministic systems, so archaeologists in the positivist paradigm avoid what amounts to speculation about symbolic culture because their conclusions are not verifiable, or more properly, not falsifiable.

Without accepting the existence of chaos in physics, a full explanation of many phenomena is impossible. Similarly, the treatment of symbolic culture as unassailable and thus unimportant is not acceptable. Symbols are the physical expression of cognition, the means by which the human mind structures the world. Symbolism irrevocably links ostensibly disparate activities into a cohesive whole. Something as integral to the food quest as harvesting crops is in all cultures overlain and interwoven with ritual and symbolism. There is no clear way of delineating the sacred from the profane in the conscious mind. Nothing a human does can be divorced from that human’s status as a conscious, cognizing, symbolising entity (Mithien 1989). The idea that all aspects of culture have a symbolic dimension throws a spanner in the works of the kind of selective reductionism that processualism represents.

The second phase in the development of chaos maths, Kuhn’s search for a new paradigm, is represented in archaeology by the emergence of the wide variety of approaches nestling uncomfortably under the umbrella term “post-processualism”. Turning away from the natural sciences, post-processualists have looked to philosophy for a better way of interpreting an archaeological record that they view as the product of cognising individuals. Succinctly restating his position at the euro-TAG ‘92 debate “Archaeology as anthropology, 30 years on, where next?”, Chris Tilley argued for an archaeological record without meaning, onto which

we impose our own interpretations as dictated by our own subjective world views. In the analogy with physics, this represents the problem of initial conditions - if interpretation is a subjective act, and our interpretations start from our individual ideological perspectives, the meaning each archaeologist finds in the past will be utterly different. A graphic example of the complexity of the past/present dialectic which constitutes our understanding of the past is offered by Ruiz and Nocete (1990, matrix 1), but a more striking illustration of the extreme post-processualist position is Tilley's *Material culture and text: the art of ambiguity*. (1991).

Taking the rock-carvings at Namforsen as a single text, drawing on the work of Levi-Strauss, Derrida and Barthes (Tilley, Olsen & Yates (respectively) in Tilley (ed.) 1990) Tilley proceeds to apply a variety of methodologies to the interpretation of the designs. He succeeds in producing three rigorously argued, and equally rigorously criticised, "readings", each distinctly different according to its parent methodology. The resulting book, complete with introspective dialogue and retrospective statement of aims and biases is engaging, provocative, and unlike many theoretical archaeologies, highly readable. It brings out the central problem of post-processualism - how to evaluate which of the readings is the correct one. Tilley draws no conclusions, presenting each as equally valid, hoping to draw the reader into the debate. The effect is reminiscent of Channel 4's "Whose line is it anyway?", with Tilley reading the carvings "...in the style of three famous philosophies...", prior to an arbitrary number of points being awarded on the basis of how entertaining the performance was.

The concept of multiple subjective pasts has taken post-processualism into the realm of art, where archaeological interpretation is a means for the creative expression of personal ideologies. The idea of the past as a product of contemporary interpretation is a valuable concept, but post-processualism makes little attempt to solve the problem, to find a way around the loss of objectivity. Instead it seems to enjoy the freedom from objective analysis that it has discovered. If archaeology can't move beyond wallowing in ignorance, we may as well throw in our lot with the hitch-hiker Dr Séamas Caulfield once encountered, en route to the Behy court-tomb with the sole intention of "feeling the vibes".

Hodder's (1991) "Contextual Archaeology" and Renfrew's "Cognitive Processualism" (Renfrew & Bahn 1991) represent two attempts to forge a coherent interpretative methodology out of post-processualist criticisms. Hodder's argument that all behaviour is meaningfully constituted by individuals leads him to urge an understanding of the context within which those individuals act. However, he also argues that because the contextual data is incomplete, all interpretations must be subjective and thus reflect the archaeologist's own world. As Bintliff (1991) points out, there is something of an internal contradiction in a methodology which tries to understand the intentions behind behaviour, while accepting that any interpretation of these intentions depends on the projection of modern preconceptions into the past. Renfrew, on the other hand attempts to incorporate post-processualism into a positivist framework recognising the importance of the individual, the active role of material culture, ideology and internal conflict, while rejecting the search for laws of cultural process. His aspiration is to escape the hyper-relativism of the post-processualists by returning to the hypothetico-deductive method, while taking heed of the useful points raised. The attempt of "Cognitive Processualism" to be all things to all archaeologists leaves it with a very contrived feel, and it fails to address how to deal with the subjectivity inherent in approaching issues of cognition via an incomplete dataset.

The successes of Hodder's approach were on display at euro-T AG '92, in papers dealing with structured deposition delivered by Julian Thomas and Koji Mizoguchi. "Cognitive

Processualism” may have been there somewhere, but outside of Renfrew’s own contribution to the main TAG debate, it was not explicitly in evidence.

Leading the way into the third stage of the chaos analogy was Binford’s address to the same debate. He argued that the role of archaeology is not the creation of subjective texts, but the transformation of ignorance into knowledge. The key to progress is not just admitting the inadequacy of your prior knowledge about the past, but seeking out your ignorance. We know now what our problems are, and must use that knowledge to move ahead.

Lessons to be learned:

The contention of this article is that by looking at how physicists have dealt with their insoluble problems, we can find pointers as to how to solve our own. As has been put forward in the previous section, there are reasonably close qualitative parallels in the type of obstacle and the reactions to it. In order to deal with the loss of predictability that chaos implies, physicists moved outside the problem and looked at what it told them about the universe. In physics the lesson was that complicated phenomena can develop from simple equations. In archaeology, the root of our problem is the unacceptably subjective input required to “fill in the gaps” in the evidence, particularly since much of the missing information concerns the meanings that were attached to objects, places and activities. Subjectivity is unavoidable, so instead of eliminating it by abandoning the higher levies of inference, as the French logical positivists have attempted to do (Gallay 1989), or embracing it as a source of endless rhetoric as some post-processualists have done, the solution is to make the gaps in the evidence smaller. This serves to reduce the amount of subjective judgement involved in interpretation. One way to approach this is to learn more about the symbolic aspect of human cognition.

There was no shortage of papers tackling this issue at euro-T AG ‘92, albeit without the explicit brief of being “the way forward”. Of particular interest were the three papers delivered by Camilla Power, Chris Knight and Ian Watts in the session cluster “Synthesizing sociobiology with structural anthropology”. Presenting a united front they looked at different aspects of the emergence of symbolism at the Middle/Upper Palaeolithic boundary, linking it to changing female reproductive strategies centring on ovulatory synchrony (Knight 1992). Much of the discussion was couched in explicit Revolutionary Marxist terms, but made constant recourse to a wide variety of archaeological, biological and anthropological evidence to produce a satisfyingly objective conclusion that debate from the floor only succeeded in strengthening.

Jeremy Dronfield’s paper also tackled symbolism, though in this case the origins of a particular image - the spiral motif in Irish passage tomb art. Dronfield attempted to apply the reasoning used by Lewis-Williams in southern Africa (Lewis-Williams & Dowson 1988), interpreting the spiral as a product of entopic hallucinations related to altered states of consciousness. While some of Lewis-Williams conclusions have been called into doubt by Parkinson (1989), the possibility of identifying physical stimuli that produce specific neural images, which are then interpreted by the recipient in the light of his /her cultural context as having a particular meaning (in Dronfield’s thesis, a linking tunnel between this world and the otherworld) is intriguing. The linking thread between Dronfield’s ideas and Knight et al is the use of biological evidence to examine the generation of symbols.

This approach is given a theoretical justification by Mithien (1989), who while accepting many of the post-processualist criticisms demonstrates the value of a revised evolutionary biology for archaeological interpretation. He argues that for consciousness to evolve in

humans, cognition and symbolism must have had conferred survival or reproductive attributes. This is the idea Knight (1992) puts across in his pamphlet, where the symbolic link between menstrual blood and haematite/ochre takes on a key role in females acquiring meat for their young in the worsening climate of the later Middle Palaeolithic. Mithien goes on to use the biological roots of consciousness to suggest an evolutionary approach in archaeology concerned with

“...active individuals endowed with common psychological propensities to think and act in certain ways rather than others, taking decisions in ecological, social and historical contexts unique to themselves...”(Mithien 1989, 49).

Conclusion:

It should be reiterated that the intention here has not been to suggest the workings of chaos in the archaeological record, but rather to show how recent changes in natural sciences has created a new approach to problems not dissimilar to those faced by archaeologists in interpreting the incomplete material culture of cognising individuals. By following the lead of physics in accepting the insolubility of the problem of chaos, archaeologists should acknowledge that interpretation of imperfect data is by its nature subjective. By concentrating on how and why humans attach meanings to symbols from a scientific rather than philosophical standpoint, archaeologists can begin to move towards a more objective appraisal of the symbolic culture. This serves to reduce the impact of subjectivity in understanding archaeological evidence.

That said, making evolutionary biology, neural biology and psychology the focus of archaeological endeavour may have more than its fair share of unpleasant side-effects. As Bintliff (1991) has argued, theoretical archaeology already operates an “exclusion principle” against many archaeologists by virtue of the prodigious size of the bibliography one must tackle to become even semi-literate. The introduction of several new scientific disciplines to the spotlight of theoretical archaeological debate might serve only to bring out the truth of Andrew Fleming’s comment on post-processualism:

“How broad can a church be without the roof falling in?”(Fleming 1990, 83).

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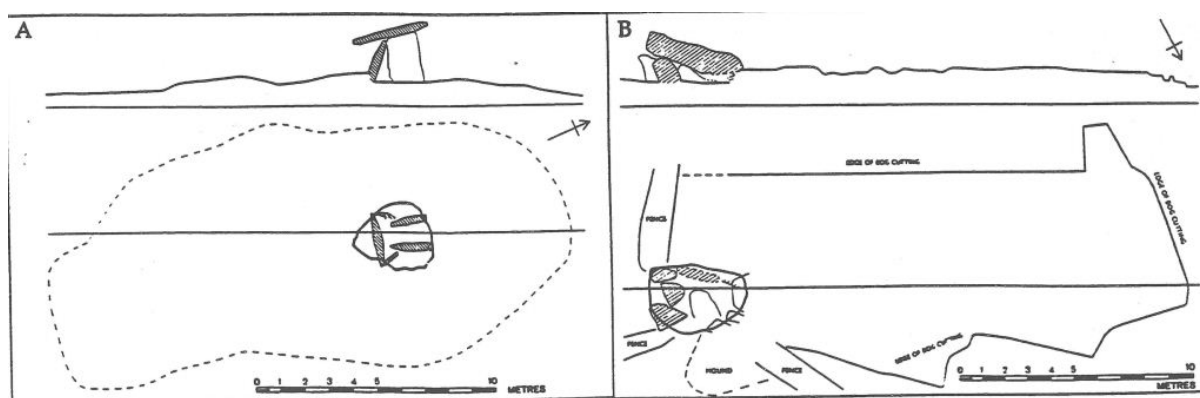
Full Doorstones in Portal Tombs, precluding successive burial

Edmond O'Donovan

The first synthesis of Irish megalithic monuments was written by William Borlase (Borlase 1897). The three volumes when published included county by county catalogues and descriptions, comparisons with other megaliths from Europe, North Africa and Asia, and volumes on folklore and anthropology. Borlase relied heavily on Irish antiquarians for field information, but regardless of what sources he used, the advantage of having information compiled into one overall text must be acknowledged. The scope of Borlase's work is wide and can be commended as being unparalleled at its time, it however failed to accurately classify the monuments contained within.

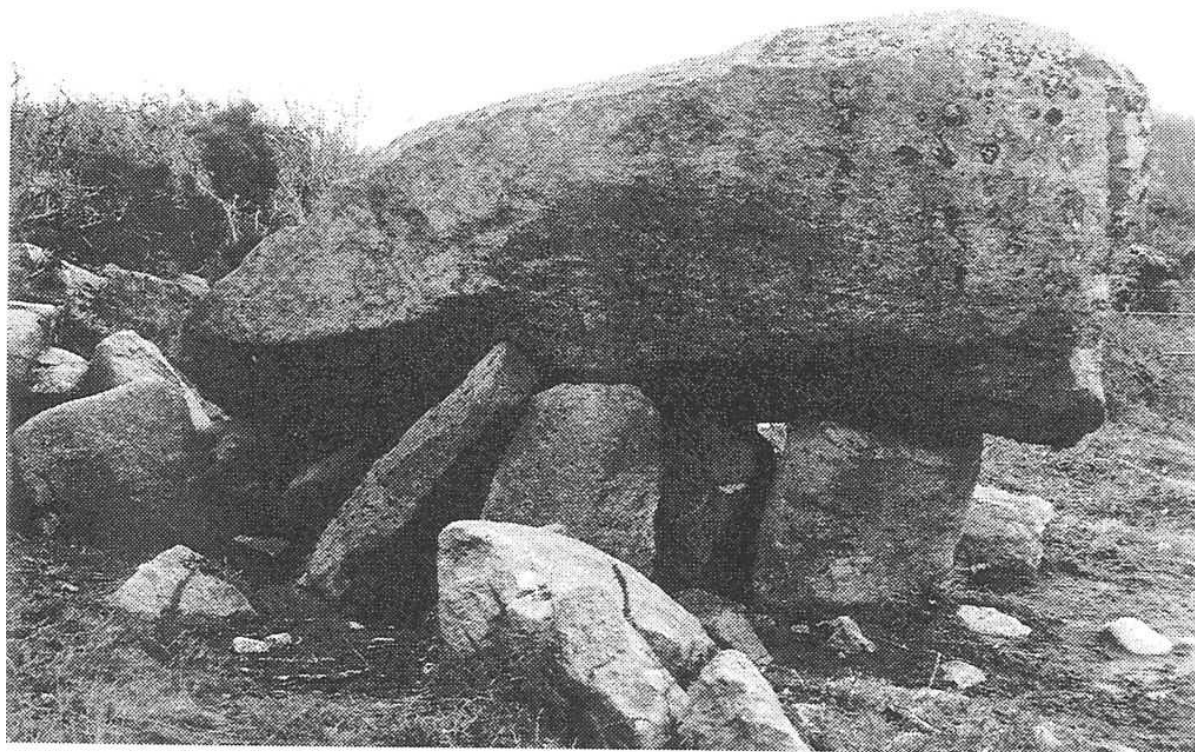
Antiquarians such as Westropp who supplied Borlase with field notes, published their own theories on megalithic tombs (Westropp 1902). Since then a number of regional accounts have been published (e.g. Powell 1941). Also a considerable number of excavations were carried out on megaliths between the 1930's and 1960's, these formed the basis for many discussions on problems current at that time. However, it was not the function of these reports to go beyond the material directly related to those excavations, the conclusions tended to be site specific.

It was not until 1961 with the publication of the first volume of the Megalithic Survey that a replacement for Borlase's work was undertaken (De Valera & 6 Nuallain 1961). That and subsequent volumes (De Valera & 6 Nuallain 1964; 1972; 1982; 6 Nuallain 1989) contain as complete a survey as is both possible and practicable. They represent the most up to date account of these monument types in the Republic. Not surprisingly de Valera and 6 Nuallain have dominated opinion on the origin, development and classification of megaliths, since the early 1960s. This domination is not a criticism; indeed the Megalithic Survey is something of which Irish Archaeology can be fully satisfied. However, because of the complete and total nature of the evidence presented to date, archaeological opinion contrary to that of de Valera and 6 Nuallain has been overshadowed by their block of published material. Therefore, theories which they did not concur with, received little attention in their literature. A case in point is blocking in court tombs (Waterman 1965). De Valera felt that blocking was merely collapse from the cairn around the entrance to the burial gallery, while Waterman took its existence to represent an elaboration of the burial ritual. In contrast, the most positive evidence for blocking in an Irish megalith type is present in portal tombs with full doorstones. This evidence has only been considered very briefly by other authors.



A. Crannagh Portal Tomb Co. Galway with no doorstone.
(source de Valera & Ó Nualláin 1972, Fig. 13)

B. Crowagh Portal Co. Sligo with full doorstone.
(source Ó Nualláin 1989, Fig. 45)



Kiltiernan Portal Tomb, Co. Dublin, showing capstone resting on full doorstone (Photo E. O'Donovan)

Plate 1

There are 163 portal tombs in Ireland (6 Nuallain 1983). Of these, 25 have half doorstones, as found at Ballykeel, Co. Armagh, 6 have sillstones as at Moneygashel, Co. Cavan, 50 have no doorstone and 54 like Templemoyle, Co. Donegal are in such condition so as little or nothing can be evaluated. The remaining 30 have full doorstones. A good example is at Brennanstown, Co. Dublin. The portal tombs with full doorstones have a restricted distribution, with one linear group of nine sites extending eastwards from County Mayo to County Cavan. A second larger group of nineteen sites are found in the counties south east of a line between Dublin and Cork or 6 Nuallain's region 7 and 8 (6 Nuallain 1983). The total number of tombs in this area is 36, so 19 represents a considerable proportion. This is further emphasised when we consider that nearly all the remainder are in a ruinous condition. Does this mean tombs like Woodtown, Co. Dublin and Owing, Co. Kilkenny which are in a fragmentary state presently, had full doorstones at the time of their construction, or is it for some reason that the tombs without full doorstones have been destroyed? This remains a curious statistic until we evaluate the significance of closure or blocking in Neolithic burial monuments.

The Neolithic of Britain and Ireland has often been referred to as the Western Neolithic (Piggott 1954; Megaw & Simpson 1979). A culture characterised by early farmers who used round bottomed shouldered pottery bowls, lithics for tools and buried their dead in monumental ritual tombs. The Western Neolithic was regional character, with specific cultural groups arising in separate geographical areas (Megaw & Simpson 1979; Whittle 1985). These regional groups, although different still had elements that point to inter relationship with each other or a possible common ancestry. This means that we can draw on

evidence in Britain relating to mortuary practice in megaliths and suggest parallels with the Irish evidence.

In his excavations at South Street long barrow (Ashbee *et al.* 1969), Evans elucidated a number of stages within the use and construction of the monument. Firstly there was the burial and the erection of the mortuary enclosure and lastly the construction of the earthen long barrow over the remains of the mortuary enclosure. In his discussion he differentiated between two phases in the use of the long barrow. Phase one, the burial and cremation: funerary use, and phase two, when construction of the monument made a visual impact on the landscape. For those who built the monument the primary burials were to be the only burials under the mound. It appears that the mound was built to cover a restricted number of individuals and was not meant for successive burial. When generations passed on, the monument would not necessarily impose the same constraints on individuals and burials could and did take place again. This would hold for all unchambered long barrows.

If we look at portal tombs with full doorstones such as those at Howth Demesne, Co. Dublin and Haroldstown, Co. Carlow, we might suggest parallels with South Street. Both monuments possess substantial doorstones blocking the entrance into the chambers completely. At Haroldstown the inward inclination of both portal stones hugs the doorstone. This indicates that when the tomb was being built the doorstone was in place before the portals were erected. It would be impossible to build the Haroldstown tomb and subsequently place a burial in it, without having to push the human remains through the gaps between the stones or in at the sides. The insertion at the sides seems implausible since the character of the tomb is designed around an imposing entrance feature in the shape of two portal stones, which gives the tomb type its name. It also seems implausible that the capstone would be removed to allow for occasional burials. The size of capstones in the south east of Ireland is considerable, up to one hundred tonnes (Borlase 1897). Traditionally it would be contended that the megalithic structure of the portal tomb was built first and that interment of burials occurred later. In the case of portal tombs with full doorstones we might see a mirroring of the phases outlined by Evans at South Street long barrow. There is a burial and then construction. These phases do not have to have occurred over a long period of time; in fact it is more likely that they occurred within a short space of time. There must be a moment when there is a burial without a completed tomb.

Powell saw the evolution of tombs in the south east of Ireland developing from those with open galleries into those whose chambers are sealed (Powell 1941). This theory is seriously flawed; it means that wedge tombs develop into portal tombs. He did however isolate 6 Nuallain's portal tomb group 7 and 8 (6 Nuallain 1983). 6 Nuallain in his 1983 paper published a map of this area in which it is clear that he is comparing the riverine siting and distribution of Portal tombs with that of Linkardstown cists. This point was first made by Herity (Herity 1981) and he elaborated further in his 1982 paper by saying:

“...the construction of chambers of some portal tombs with full closure at the entrance apparently precluding successive burials...” (Herity 1982, 290)

as occurs with the Linkardstown cists. The cultural affinity between the two types is further emphasised when it is acknowledged that the full doorstone in a portal tomb constructs a cist not dissimilar to those within individual burial mounds both physically and ideologically. Linkardstown type burials must also, like unchambered long barrows and portal tombs with full doorstones, have had both a funerary use phase and a construction phase. What is vital now, is to evaluate the burial rite which accompanies the portal tomb.

The evidence suggests that burial practices of the court tomb builders were egalitarian (Herity & Eogan 1977). Blocking is difficult to prove in the case of this tomb type. The evidence from excavations points towards a continuous rite. At Ballymacaldrack, Co. Armagh radiocarbon dating suggests that continuous burial only ceased 500 years after its construction (Collins 1976). The pot from Ballymacaldrack which was found in a secondary context has almost exact parallels with examples from deposits in Portal tombs and Linkardstown cists (Herity 1982). These pot styles have been known as Becharra ware (Piggott 1954) and Ballyalton bowls (Case 1961), this is Herity's necked style (Herity 1982). The portal tomb at Ballykeel produced three pots in this style (Collins 1965). The tomb class which most frequently contains well provenanced pottery of this type is the Linkardstown type cist, with almost complete pots occurring at Ardcroney (Wallace 1977) and Drimnagh (Kilbride-Jones 1939). Other similar sites have produced the same diagnostic burials and grave goods. These pot styles must have been current when the mounds for Linkardstown cists were being constructed because of the closed nature of the burial deposit within them. Linkardstown cists have been dated by C14 to the first half of the 3rd millennium B.C. (Brindley et al 1983) The evidence suggests, therefore, that the construction and use of the Ballykeel portal tomb must be contemporary or earlier than the construction and use of the Linkardstown type cists. The primary burial rite in portal tombs has yet to be established with certainty. Several of them have produced necked pottery (Herity 1969), thus the archaeological evidence provides valid reason to link individual burial mounds and portal tombs on the basis of pottery. Sufficient evidence does not exist to resolve the number of primary burials which were interred in Portal tombs. However the number of burials may be as low as one individual.

In Ireland the distribution of portal tombs over lies that of court tombs, except it extends further south, particularly in the south east of the country. Can we view the portal tombs in the south east as being contemporary with those in the north? A considerable number of them are morphologically different, they have full doorstones. However, it is not yet possible to tell whether they occurred as a development or as a prime mover. In short is this difference chronological or cultural? Such central questions must be addressed before clarity will emerge and explain some of the shortcomings which are evidently present.

There is a well-documented group of burial tumuli in Ireland which are termed both individual burial mounds or Linkardstown cists (Ryan 1981). These mounds are the burial place of individuals accompanied by grave goods, often a Neolithic necked pot. They have a siting and distribution similar to that of group 7 and 8 portal tombs (6 Nuallain 1983). The morphology of the portal tombs in this region is different from the majority of others in Ireland. Full doorstones, the element which distinguishes them, is the characteristic which links them ideologically with the burial ritual in Linkardstown type cists. The finds and the number of burials from portal tombs has closer affinities to Linkardstown cists than to any other class of megalithic tomb, although this is not so certain. The dating of portal tombs is problematic, but some degree of contemporaneous use between individual burial mounds and portal tombs is certain. In conclusion, both portal tombs with full doorstones and Linkardstown type cists date to the same period, occur in the same location both spatially and topographically and belong to the same cultural background.

Acknowledgements

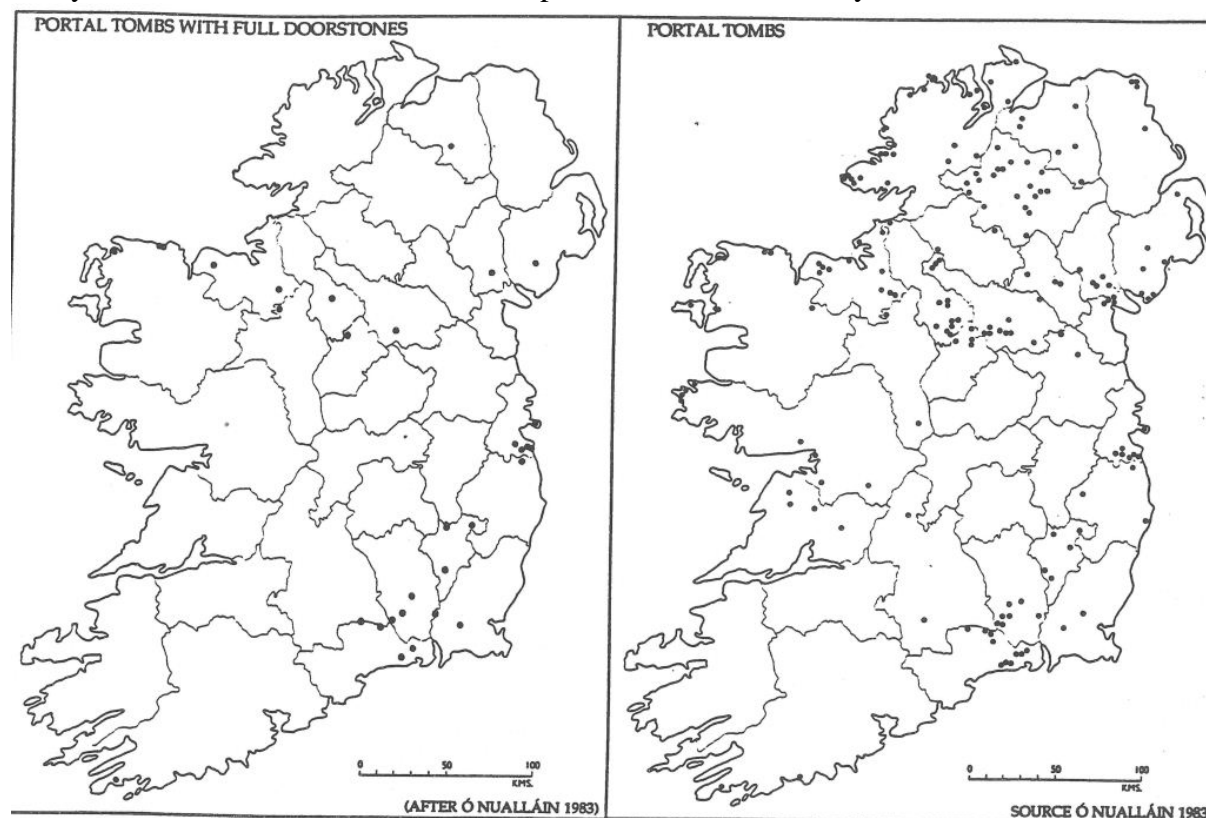
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CATALOGUE OF PORTAL TOMB ENTRANCE FEATURES

This catalogue is based on the dimensions contained within Ó Nualláin's article (Ó Nualláin 1983) on the topography, siting and distribution of Portal Tombs. It gives the townland name for each site, six inch grid reference and the classification of the entrance feature of each tomb. They are as follows:

FDS= full doorstone; HDS= half doorstone; ST= sillstone;
NDS= no doorstone; Ruined= tombs which are unobservable or incomplete.

A full doorstone was classified as such if the doorstone was 75% the size of either portal stone or more. A half doorstone was anything between 75 to 30% of either portal stone. A sillstone is any entrance stone below 30% of a portal stone. A site where the capstone rests solely on the doorstone and not on either portal stone is denoted by an *



CO. ANTRIM

1. Ballyvennaght	D 202 367	HDS.
2. Ballyvennaght	D 207 372	Ruined.
3. Ballyvennaght	D 208 365	NDS.
4. Ticloy	D 231 117	Ruined.

CO. ARMAGH

1. Aughnagurgan	H 870 285	NDS.
2. Aghmakane	J 020 253	FDS.
3. Aughadanove	H 999 206	HDS.
4. Ballykeel	H 995 213	HDS.
5. Clonlum	J 046 205	HDS.

CO. CARLOW

1. Kernanstown	S 755 768	FDS.
2. Haroldstown	S 902 778	FDS.
3. Ballynoe or Newtown	S 856 692	Ruined.
4. Kilgraney	S 702 553	Ruined.
5. Ballynasilloge	S 745 523	FDS.
CO. CAVAN		
1. Burren	H 073 345	NDS.
2. Burren	H 076 351	Ruined.
3. Moneygashel	H 061 340	ST.
4. Mayo	H 645 133	Ruined.
5. Banagher	N 471 996	Ruined.
6. Middletown	N 344 924	NDS.
7. Carrickclevan	N 348 963	NDS.
8. Drumhawnagh	N 351 925	NDS.

9. Aghawee	N 437 929	NDS.	4. Goward*	J 243 310	FDS.
10. Carrickacroy	N 459 915	HDS.	5. Kilfeaghan	J 232 153	NDS.
11. Duff castle	N 474 920	FDS.	6. Kilkeel	J 308 148	NDS.
12. Ballaghanea	N 624 864	Ruined	7. Ballynahatten	J 285 124	NDS.
CO. CLARE			CO. DUBLIN		
1. Poul nabrone	M 236 003	ST.	1. Howth Demesne	O 276 382	FDS.
2. Ballycasheen	R 245 924	HDS.	2. Taylorsgrange	O 158 256	FDS.
3. Moyree Commons	R 363 891	Ruined.	3. Woodtown	O 128 247	Ruined.
4. Clogher	R 546 800	Ruined.	4. Killmashogue	O 148 237	Ruined.
CO. CORK			5. Brenanstown	O 229 242	FDS.
1. Ahaglaslin	W 307 363	NDS.	6. Kiltiernan Domain*	O 198 225	FDS.
2. Arderrawinny	V 875 307	FDS.	7. Ballybrack	O 253 232	FDS.
CO. DERRY			CO. FERMANAGH		
1. Crevolea	C 846 233	NDS.	1. Glengesh	H 390 544	NDS.
2. Edenreagh Beg	C 517 166	NDS.	2. Kilrooskagh	H 062 400	NDS.
3. Ervey	C 518 126	NDS.	CO. GALWAY		
4. Drumderg	H 749 958	FDS.	1. Ballynew	L 626 584	Ruined.
5. Tirmony	C 841 017	NDS.	2. Knockavally	L 602 529	Ruined.
6. Tamlaght	H 887 790	ST.	3. Menlough	M 288 296	NDS.
CO. DONEGAL			4. Ballynacloghy	M 383 198	NDS.
1. Templemoyle	C 501 497	Ruined.	5. Crannagh	M 426 059	NDS.
2. Claggan	B 993 403	Ruined.	6. Marblehill	M 688 041	NDS.
3. Muntermellan	C 018 388	HDS.	CO. KILKENNY		
4. Ballyannan	C 335 383	Ruined.	1. Newmarket	S 505 354	NDS.
5. Ards Beg	B 899 305	Ruined.	2. Ballylowra	S 556 378	FDS.
6. Erraroorey Beg	B 964 338	HDS.	3. Owing	S 447 265	Ruined.
7. Gortnavern	C 218 304	NDS.	4. Kilmogue	S 503 281	FDS.
8. Bin	C 295 323	Ruined.	5. Glencloghlea	S 690 277	FDS.
9. Carnaghan	C 320 237	NDS.	6. Killonerry	S 416 243	Ruined.
10. Eskaheen	C 452 272	HDS.	7. Ballyhenesberry	S 444 243	FDS.
11. Roshin South	B 726 097	NDS.	CO. LEITRIM		
12. Lisnanees Upper	C 194 153	Ruined.	1. Wardhouse	G 773 577	NDS.
13. Toome west tomb	B 791 015	HDS.	2. Drumany(O'Brien)	H 073 098	HDS.
13. Toome east tomb	B 791 015	Ruined.	3. Creevy	H 107 105	FDS.
14. Cloghroe	C 128 009	NDS.	4. Fenagh Beg	H 108 081	NDS.
15. Kilclooney More	G 713 964	NDS.	5. Cloonfinnan	N 053 954	ST.
16. Kilclooney More north tomb	G 723 968	ST.	6. Sunnagh More	N 151 984	Ruined.
16. Kilclooney More south tomb	G 723 968	HDS.	7. Sunnagh More	N 151 977	HDS.
17. Sand Island	G 681 912	Ruined.	8. Annaghmore	N 141 926	NDS.
18. Lackaghatermon	G 773 957	NDS.	CO. LONGFORD		
19. Malin More	G 507 833	Ruined.	1. Melkagh	N 161 879	FDS.
20. Malin More west tomb	G 502 825	NDS.	2. Cleenrah	N 267 879	NDS.
20. Malin More east tomb	G 502 825	NDS.	3. Aghnaccliff	N 263 885	Ruined.
21. Malin More	G 517 829	NDS.	CO. LOUTH		
22. Malin More	G 518 829	Ruined.	1. Monascreebe	J 043 136	NDS.
23. Straleel North	G 588 825	Ruined.	2. Aghnaskeagh	J 076 137	NDS.
24. Gilbertstown	G 749 795	Ruined.	3. Lurgankeel	J 023 115	Ruined.
CO. DOWN			4. Proleek	J 083 110	NDS.
1. Greengraves	J 445 736	HDS.	CO. MAYO		
2. Legananny	J 288 434	NDS.	1. Ballyknock	G 083 388	FDS.
3. Wateresk	J 393 344	NDS.	2. Ballykrock	G 086 385	FDS.
			3. Gortbrack North	F 798 351	HDS.
			4. Knocknalower	F 814 344	FDS.
			5. Doogort West	F 652 073	Ruined.

6.Claggan	F 794 040	NDS.	8. Keerin	H 643 865	Ruined.
CO. MEATH			9. Leitrim	H 225 799	NDS.
1. Ervey	N 769 931	Ruined.	10. Carncorran Glebe	H 289 824	HDS.
CO. MONAGHAN			11. Altdrumman	H 578 768	NDS.
1. Garran	H 597 257	NDS.	12. Scraghy	H 222 738	Ruined.
2. Lennan	H 745 233	Ruined.	13. Cloghfin	H 519 722	Ruined.
CO. ROSCOMMON			14. Athenree	H 629 713	NDS.
1. Drumanone	G 768 024	FDS.	15. Creggandevsky	H 639 752	Ruined.
2. Mihanboy	M 986 402	HDS.	16. Mumells	H 680 757	NDS.
CO. SLIGO			17. Dullaghan	H 312 662	Ruined.
1. Gorteen	G 738 510	Ruined.	18. Altcloughfin	H 565 624	Ruined.
2. Cloghcor	G 600 438	NDS.	19. Ballywholan	H 555 490	HDS.
3. Ardabrone	G 552 344	NDS.	CO. WATERFORD		
4. Camcuill	G 398 313	ST.	1. Gurteen Lower	S 264 231	FDS.
5. Knockanbaun	G 403 307	Ruined.	2. Sheskin	S 376 201	FDS.
6. Tawnatruffaun	G 399 281	HDS.	3. Ballyquin	S 412 179	Ruined.
7. Crowagh or Dunneill Mt.	G 421 295	FDS.	4. Whitestown East	S 424 137	Ruined.
8. Knockatober	G 732 269	Ruined.	5. Ballindud	S 601 086	Ruined.
9. Springfield	G 739 173	Ruined.	6. Gaulstown	S 539 062	HDS.
10. Carrickglass	G 796 157	FDS.	7. Knockeen	S 574 065	FDS.
11. Moytirra West	G 813 143	Ruined.	8. Ballynageeragh*	S 494 032	FDS.
CO. TIPPERARY			9. Savagetown	S 473 025	Ruined.
1. Ardcroney	R 905 875	Ruined.	10. Dunhill	S 504 021	Ruined.
CO. TYRONE			CO. WEXFORD		
1. Killynaght	C 391 011	Ruined.	1. Ballybrittas	S 927 316	HDS.
2. Letterbrat	H 471 915	Ruined.	2. Newbawn	S 830 214	FDS.
3. Glenroan	H 548 914	HDS.	CO. WICKLOW		
4. Chruchtown	H 266 854	HDS.	1. Glaskenny	O 196 153	FDS.
			2. Broomfields	S 923 982	Ruined.
5. GlenkockorCloghogle	H 411 879	NDS.	3. Brittas	T 298 853	NDS.
6. Crosh	H 417 879	HDS.			
7. Blyrenan	H 373 832	HDS.			

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The Horse and the North American Plains Indian

Roddy Moynihan

The following paper is a brief summary of some research being carried out by the author. The paper deals with the events which came about after the North American Indian acquired a valuable new asset - the horse. It is an attempt to show, by a modern parallel just how important a study of the horse in prehistory might prove to be with regards to frontier and boundary movement, culture contact and change, the development of warfare etc. [When one considers that one of the causes for the Great Wall of China being built, was the acquisition of horses by the Mogul Empire thus allowing more frequent forages into Chinese territory, then this animal's role in man's history takes on a far greater significance].

If asked to describe an American Indian, the vast majority of people would do so by calling to mind a man with feathers in his hair, a bow and quiver or arrows slung on his back, sitting astride a small pony, hunting buffalo (or white men) on the vast plains of North America.

While this is a relatively accurate description, it is one which fits the typical Plains Indian and yet there were very few Plains Indians until the end of the 16th century A.D. The plains way of life, barring life on a modern reservation, is the most recent of all those followed by the Indian. It came about as a result of the acquisition of horses, which were not ridden until sometime after 1600. However, once this new find came into use, it drew people from every language background. The Buffalo Plains became an area where the most diverse tribes joined together in pursuit of this new wealth. The society which emerged was made up of customs drawn from the north, south, west and east. So, the Plains Indian, far from being a typical North American Indian, was a composite product.

From a geographical point, the plains are situated in the central interior of the North American continent. They extend from the Rocky Mountains in the west, to the Mississippi in the east and from the Saskatchewan in the north, to the Rio Grande in the south. In the period in question (c.1600 - 1874) they were grass covered, with areas of forest mainly in the east. Small rivers or "creeks" cut across them running east from their mountain sources to the Missouri and Mississippi rivers.

The easternmost part of the plains, the Prairies, had been settled somewhere between A.D. 1200 and 1600 by agriculturalists, more commonly known as the Village people or the Old settlers. They were made up of tribes like the Mandan, Hidatsa, Arikara, Pawnee, Caddo, Osage and Kiowa. Their crops included corn, beans, and squash. They had pottery, which was of simple globular type and lived in earth lodges which consisted of a framework of logs built over a shallow pit and in some cases with the addition of a long entranceway. The covering was of poles and brush and over this, a deep layer of earth. These Village people went onto the Plains twice a year to hunt buffalo. There was a summer hunt for food and a winter hunt for skins. Several methods were used: the buffalo were sometimes driven over cliffs or into pens, they were encircled and then killed, with in some cases, the Indians wearing wolf-skin to disguise themselves. However it was an arduous task to hunt the buffalo as it was done on foot. Due to this fact, every part of the buffalo was used: the skins for clothing, sinews for laces and thread and the stomach and intestines for water containers etc. Apart from these sporadic forays onto the Plains by the Village peoples, this vast open area saw little other human activity.

In 1598, the Spanish came to New Mexico, and they brought with them an animal which later revolutionised the whole lifestyle of the Indian. This animal was the horse. The Spanish brought a specific breed with them with them, namely, the Andalucian, which was Arabian in origin. The Andalucian was thus completing a full circle which had begun roughly 55 million years previously, with the appearance of Eohippus or "Dawn Horse" on the North American continent. Horses had died out in North America some 8000 years before the Spanish arrived, for reasons still unclear. Therefore, when Cortes came to America, he was easily able to defeat the Aztecs in Mexico with a mere 16 horses. The Aztecs, never having seen a horse before, thought of it as some supernatural beast and so Cortes' attacks were like psychological warfare, as he acknowledged himself.

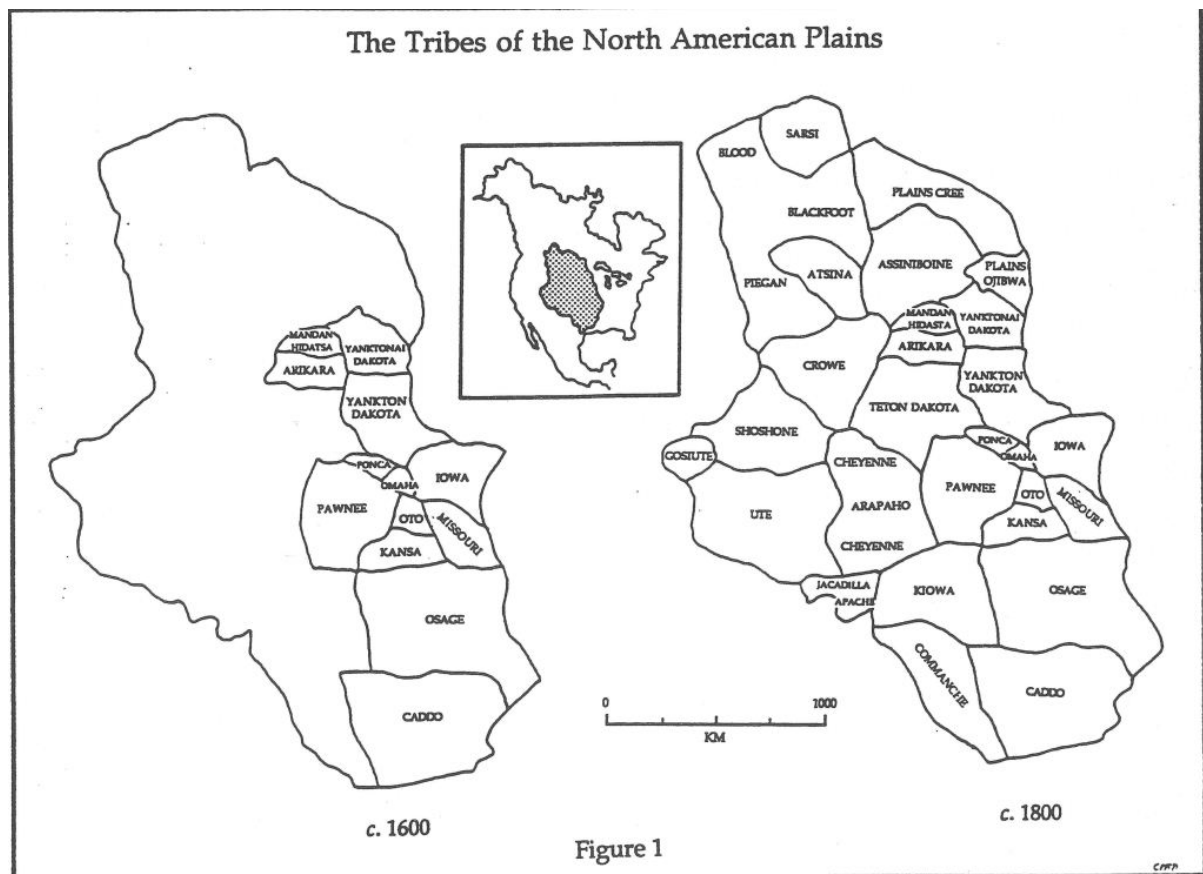
The Spaniards in New Mexico did not let their subject Indians, the Pueblos, have horses as this would have given them too much independence. However, they did trade horses with more distant tribes in an effort to keep the peace. The first Indians to get horses did not know what to do with them, however it was not long before their full potential was realised. By 1676, the Coahuila Indians of Mexico were following regular trade routes up through Texas, bringing horses to the Caddo and other tribes on the periphery of the plains. Soon the Navaho and Apache were on the move up towards the plains. In 1680, the Pueblo Indians drove the Spanish away for 12 years. Their huge ranches went into disuse and more importantly, many of their horses escaped and made their way to the plains where they roamed wild and in huge numbers. The Spanish later called these horses "mestenyeno"-meaning wild - and it is from this that the English word "mustang" comes. The Indians who had no name for horses called them "mystery dogs".

The Village people were among the first to obtain horses and their agricultural way of life suffered badly. Their culture, which had been developing very well along its own lines was practically cut short. They were now able to spend months on the Buffalo Plains as a result of obtaining the horse. However, for the nomadic hunters, who lived north, west and east of the plains, this was not the case. They came literally from every part of the country. Blackfoot, Arapaho and Cheyenne came out from the eastern woods. These too gave up the beginnings of a settled civilisation and reverted to a hunting way of life. Comanche came from the western foothills, Crow from the Mississippi; however it is not clear where the Kiowa came from. The last to arrive, and the most famous of them all, were the Teton Dakota, more commonly known as the Sioux. They trekked out of the woodlands of Minnesota and did not reach the Missouri until 1775, the year of the American Revolution. There they traded for horses with some of the oldest settlers, the Anishinabe, and their life as Plains Indians began.

The Plains Indians were among the richest Indians of America because wealth came to be measured in horses, not in money. A wealthy Blackfoot might own up to 50 horses with a poor one having about 6 or thereabouts. By 1874, 120,000 Plains Indians had 160,000 horses. The Plains Indians or Horse Culture, as it is often referred to, came to its peak around 1800, but by 1850 it was on the wane. It can best be described as a meteor like culture as it lasted no more than 200 years. It came about as a result of the horse and to an extent white settlers who pushed some of the tribes west onto the plains. Their lives centred upon the buffalo which they hunted and the horse on which they hunted down the former. Their whole culture was a mixture of customs from over 30 tribes which inhabited the plains. This shows how adaptable the Indians were: when they arrived on the plains each tribe had an identifiable culture and when they were being forced off them there was a single culture for all.

Their lifestyle came to an abrupt halt after Custer was massacred by the Sioux and Cheyenne in 1874. After this battle, a Ghost Dance was taken up by the tribes which foretold of the

removal of the whites. These hopes ended at a large gathering for a Ghost Dance, shortly afterwards, when the Indians were routed at Wounded Knee. After this the Horse Culture went into decline also it seems the animal responsible for the development of the culture in the first place was also the death of it.



Conclusions:

A number of interesting facts arise from this paper. Firstly, with regards to frontier and boundary movement, it is evident that the horse caused the Indians to move their frontiers and boundaries onto the plains, in some cases giving up their settled agricultural way of life. While white settlers pushing westward would have been a factor in the easternmost tribes moving onto the plains, they would not have been the cause of tribes from the north, south and west doing so. This frontier and boundary movement can be directly attributed to the horse.

Secondly, with the coming together of so many tribes a culture contact and change was inevitable. As mentioned above, when the plains way of life began, each tribe still retained its own distinct culture, by 1874 there was a single culture encompassing all.

Thirdly, it revolutionised warfare for the Indians putting them on a slightly more equal footing with the white settlers.

Fourthly, the above is also an example of how in cases, a farming community reverted to a hunting lifestyle when a new element was added to its culture, in this case the horse. It serves as a useful reminder when studying European prehistory, that the transition from hunting to farming may not be so clear cut and that a reverse to hunting may have taken place in some areas.

As a last word, it is evident from the earliest written sources down to those of the present day, just what an important role the horse has played in mankind's development. It does not require a vast leap of the imagination to conclude that this may also have been the case in prehistory and, a more detailed study of the horse's role - not just the horse-bits and various other trappings, but the horse itself, would go a long way in helping Man to better understand his own past.

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Hagiography: a resource for the archaeologist.

Teresa Bolger

Hagiography is all writing which deals with saints and sanctity. The most obvious form this takes, particularly in Ireland, is that of saints lives, of which a large body survives from the Early Christian period. For the purpose of this article, I will be confining myself to texts reliably dated to seventh century, specifically Cogitosus' Life of St Brigit, Adomnan's Life of St Columba and the Patrician texts in the Book of Armagh.

There are a number of references, such as Cogitosus' description of the church at Kildare, with which I will not be concerning myself, as they have already been considered in some detail. I should point out at this stage that while the texts purport to describe events in the 5th and 6th centuries, they in fact relate to their time of writing - the 7th century.

Adomnan's work perhaps best illustrates the insight into daily life, particularly of the monastery, afforded by hagiography. While it is rare that activities are described in great detail, the number and nature of them gives a good idea of what daily life in the monastery involved. In the Life of Columba we are presented with a picture of monks fishing, harvesting (this is consistent with evidence from pollen and from plough-marks - Barber 1981), writing and copying manuscripts and there is an indication that metal-working is taking place. Cogitosus' Life of St Brigit also mentions reaping of the harvest.

Wood and wood-working are aspects of the archaeological record which are generally badly preserved on excavated sites. However in the 7th century wood was one of the main construction materials, and in the case of Iona would appear to have been imported into the island:

"When dressed timbers of pine and oak for a long ship were being drawn overland, and timbers were conveyed from the great house, as well as for ships... with boats and curachs to tow the pieces of timber through the sea"

(Anderson & Anderson 1961,455)

Similarly wattles for the building of a house were conveyed to the island:

"...having filled the freight-ship with the aforesaid materials of wattle..."

(Anderson & Anderson 1961,329)

Adomnan also refers to the building of a large house at Durrow (ibid. 265), and also interestingly a later chapter heading gives one of the few references known to a round house:

"...he fell from the top of the round monastic house in the plain of the oakwood [Durrow]..."

(Anderson & Anderson 1961,495)

There is a rather ambiguous reference in Cogitosus which would appear to indicate the existence of wood-cutters much in the same way as specialists in other crafts would appear to have existed, from both the archaeology and the literary tradition:

"...by those who used to ply their trades in the timber forest..."

(Connolly & Beard 1987,21)

Another reference in the Life of St Brigit describes the building of a road-way or trackway through a bog:

“...build a solid wide road. They were to lay a foundation of tree branches and rocks and some very solid earth-works in the deep and virtually impassable bog and in the sodden and marshy places through which a large river ran... it could bear the weight of the charioteers and horse-men and chariots and wagon-wheels and the rushing of people and the clash of enemies an all sides...”

(Connolly & Picard 1987,23)

Up until the last few years most bog trackways would have been considered Early Christian or Medieval in date (Raftery 1990). However, extensive fieldwork in recent times has revealed their long prehistory. Trackways with similarities to the one described by Cogitosus and others of greater or lesser sophistication are known from as early as the 4th millennium B.C. right up to relatively recent times, indicating the long currency of such structures. Thus, while Cogitosus is giving a description of what the building of a trackway involved in the 7th century, the long history¹ of such structures in the landscape should not be forgotten.

Not all references to wood are so practical. While the passage from Cogitosus describing the church of Kildare, with its paintings and carvings is quite well known, there is also a reference in Tirechan to wooden carvings with which it must be supposed he was familiar:

“... but were as stiff as wooden images...”

(Bieler 1979, 149)

While most of the evidence for altars which survives is in stone, a reference in Cogitosus indicates that wood was also a medium used:

“...the wooden base on which the altar rested...”

(Connolly & Beard 1987,14)

It has been suggested (Thomas 1971) that this description is comparable with the simplest form of table altar with a single central leg and similar to a small pedestal table. There are a number of references in Tirechan to “...altar stones...” which would appear to be of some importance as they were, on occasion, presented by Patrick to newly founded churches and in the opening passage they are among the items of note which he brought with him over the Shannon. It is possible that these refer to the mensa - the consecrated upper surface of the altar. Normally five crosses, indicating their consecration, are inscribed on them. Small portable models may also have existed which were placed on altars thus would account for the lack of such remains on some sites today. There is also the question of altars with a concavity, usually central, for the placement of relics or altaria [altar stones]. This is the term used by Tirechan, though what he refers to is unclear. It is worth noting the implication from the references in Tirechan that altar stones were among the pre-requisites for founding a church.

Also on the subject of wood and its use in an ecclesiastical context, there are a number of references in Adomnan, Tirechan and Muirchu to crosses probably of wood. Usually the reference is in relation to the commemoration of some action by the saint:

“Holy Patrick, standing in the said place on the right-hand side of Sliad Miss... to the present day a cross stands there to mark [the spot of] his first view of the district.”

(Bieler 1979,81)

However, in at least one case the cross is in a funerary context

“... she mistook a pagan’s tomb for the grave of her son and placed a cross beside a pagan...”

(Bieler 1979, 15)

These references are of particular note in the consideration of cross-inscribed grave slabs and in the development of high crosses. The indications are that a cross of some form was used to mark Christian graves, and that perhaps somewhat larger crosses were erected to mark specific events, such as the cross of Patrick and Columba, possibly raised to commemorate the granting by Armagh lands at Kells to monks fleeing Iona.

It is worth noting at this point the reference in Adomnan to a cross erected in a mill-stone, particularly in light of the mention in Cogitosus to a horizontal mill, one of the earliest known references in an Irish context. This is not only important to their dating but also indicates that mill-stones were made where the rock type was available and highlights the apparent problem of fire:

“... to the mountain on which the mill-stone had been fashioned...nothing could set the mill in motion... neither the propulsion and driving force of the strong river, nor the violent force of the waters,...it remained alone undamaged without any harm to it from the fire in the big conflagration of the mill...”

(Connolly & Picard 1987,24-25)

The descriptive references to burial create some interesting questions for the archaeology to answer. In Tirechan there is a brief description of Patrick’s burial of his charioteer:

“And his charioteer died at Muireasc Aigli...and there Patrick buried his charioteer T6tmael and gathered stones for his burial place.”

(Bieler 1979,153)

It is possible that the sort of burial described here is similar to that at Reask (Fanning 1981), where stones were an integral part of most of the burials. It has been suggested (O’Brien 1992) that pagan burial continued well into the Christian era. Adomnan describes the baptism and subsequent burial of a pagan on the island of Skye:

“...and there his companions buried him, building a cairn of stones.”

(Anderson & Anderson 1961,275)

Perhaps the most thought provoking passage of all is Tirechan’s description of the burial of the daughters of Loeguire:

“And they buried them beside the wall of Clébach, and they made a round ditch after the manner of a ferta, because this is what the heathen Irish used to do, but we call it relic, that is, the remains of the maidens.”

(Bieler 1979,145)

This raises many questions. How can a 7th century writer so accurately describe a burial rite many would consider to have been long defunct? From a more linguistic point of view, the distinction between *ferta* and *relic* is noteworthy. To Tirechan a *ferta* is clearly a pagan burial

site of a particular construction and as such it is to be frowned on. *Relic* on the other hand, he relates not to the burial in general, but specifically to the remains of the girls. While it has been thought that relic and *ferta* were been equated in the text it is probably not the case. Tirechan is quite clear in his understanding of the two terms, why else should he need to qualify the meaning of relic, a borrowing from the Latin *reliquiae*, which was still only beginning to gain currency at the time Tirechan was writing. This perhaps has implications as regards place-name evidence such a Teampall naFerta in Armagh, referred to variously as *fertae martyrum* and *sargifagum martyrum* in the *Book of Armagh*. The name *ferta* was applied to it at a time when its ‘pagan’ meaning was still current, why? Archaeological excavations in the area of Scotch St, Armagh, the site of Na Ferta (Lynn 1977 and Lynn & McDowell 1988), indicates the presence of an early Christian cemetery on the site. Other than a Neolithic ditch feature, no solid evidence for a *ferta* has been uncovered. In the *Liber Angeli* there is a description of the layout of the churches in Armagh. It is quite rudimentary, but nevertheless is worth consideration:

“And these three orders are allowed to hear the word of preaching in the church of the northern district on Sundays always; in the southern basilica, however, bishops and priests and anchorites and other religious offer pleasing praises...together with relics of saints in the southern church, where rest the bodies of holy men from abroad who had come with Patrick...and of other just men!”

(Bieler 1979, 187-189)

Such is the nature of the description that one could be forgiven for assuming the existence of three churches, instead of two. This arises due to a confused distinction between the southern basilica and the church where the Roman relics were kept, Teampall naFerta. In normal terminology basilica refers to an architectural form and so it was in Europe of the first millennium A.D. However, given the lack of architectural sophistication of most Irish churches of the Early Christian period, it is fair to say that the basilica proper was unknown in Ireland. In fact the Irish considered the basilica something which was dug into the ground. To understand this it is worth remembering that European basilicas were usually built on pre-existing cemeteries or had the bones of saints and martyrs re-inhumed in them after construction. Thus it can be seen that the Irish, lacking the architectural forms, identified strongly with this mortuary aspect. Therefore, it is possible to argue that the southern basilica of the *Liber Angeli* and Teampall naFerta are one and the same. This thesis is reinforced by a later reference in the same text:

“On every Sunday in Armagh when, going to the shrine of the martyrs...”

(Bieler 1979, 191)

That Tirechan should go to the trouble of introducing the site as Patrick’s first foot-hold in Armagh is indicative of its relative importance in the 7th century, and that it should have the custody of the Roman relics. A foot note to the earlier discussion of cemeteries and churches is that Patrick is supposed to have built a church over the *ferta* in which the daughters of Loeguire were buried.

“And the ferta was made over to Patrick with the bones of the holy virgins, and to his heirs after him forever, and he made an earthen church in that place.”

(Bieler 1979, 145)

In this article I have made a cursory examination of hagiography and sort of evidence the archaeologist may glean from it. The last reference is a good indication that, even using three sources, far from discussing, I have not even fully catalogued all references of possible archaeological interest. Historical sources, particularly for the Early Christian period, are perhaps a somewhat neglected resource. This may be due in part to the problematic nature of most of them, requiring as they do expert guidance in their use. Archaeologists, generally, do not always have a strong historical background and as such tend to be sceptical of historical sources, uncertain how to ascertain “what proportion can safely be regarded as factual descriptions of real things at a given place and at a fixed time and is there independent confirmation from archaeological work...”(Thomas 1971, 203). Anyone who is familiar with the works discussed will notice that most of the details I have picked up on are the incidentals, the things that the hagiographer had no real reason to fabricate. After all the best way to make something fantastical or miraculous stand out is to set it in as ‘normal’ and unremarkable a context as possible. There is much of value in the historical sources generally, not just hagiography, it is simply a matter of perseverance and co-operation between the two disciplines of history and archaeology. I have heard the study of historical sources described as being not unlike an excavation, and I would be inclined to agree.

NOTE: The author has used the Dictionary of the Irish Language published by the Royal Irish Academy, Dublin, for the derivation and usage of Old and Middle Irish words in this article.

Acknowledgements

I would like to thank Charles Doherty, Conor McDermott, Mary O'Sullivan and Dave Long for their help and support during writing of this article.

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THE EVIDENCE FOR TOWN WALLING AT ATHY CO. KILDARE

Seamus Taaffe

*“Captain or colonel, or knight in arms
Whose chance on these defenceless dores may sease,
If deed of honour did thee ever please,
Guard them, and him within protect from harms”*

(Milton)

During the course of the English civil war in 1642 the royalist success at the battle of Edgehill precipitated the withdrawal of the parliamentary forces from the field. This departure left the route open to London and the poet Milton's appeal to the royalist forces reflected not merely the fragile nature of the tranquil world of the muse but also the manner in which town life had altered in a matter of centuries.

The advent of gunpowder in Europe had rendered the defensive element in town walling redundant to such an extent that Milton probably felt that words rather than walls would have more success in deflecting any possible attacks. This attitude belied the onus that the administrations in medieval towns had placed upon the construction of walls. In the case of New Ross a poem dating to 1265 records the efforts of the townspeople in the digging of a fosse in preparation of a town wall where even the clergy engaged in the labour, they being particularly appreciated for their youth and strength (Thomas 1992). By the 16th century, for defence purposes, the simple town wall was an anachronism. Although more sophisticated defensive measures originated in the 17th century they were primarily concerned with a variety of means of disposing artillery in order to strengthen fortifications. The town wall functioned not merely as a defensive feature, for its purposes and applications were manifold. They served to both define and contain the urban fabric while acting as symbols of civic pride, power and authority.

In the case of Ireland Thomas in her recent work isolated 56 sites where town walling is quite definite and a further 35 sites where there is some evidence (generally a single reference such as a murage grant or proposed wall construction). All these sites possess some evidence whether structural or documentary of the existence of features consistent with town walling. The quality of such evidence varies dramatically from towns such as Kilkenny (Bradley 1977) which can draw on an impressive array of medieval documentation coupled with some structural remains to Deny city with the intact state of the elements of the wall there. The purpose of this study will be to consider the evidence for town walling at Athy, Co. Kildare. The town is selected not because it possesses a wealth of evidence, documentary or structural, but because the evidence is unremarkable. It is thus sometimes more informative to study the unexceptional as it may give a greater insight into the more common problems and difficulties encountered on typical sites.

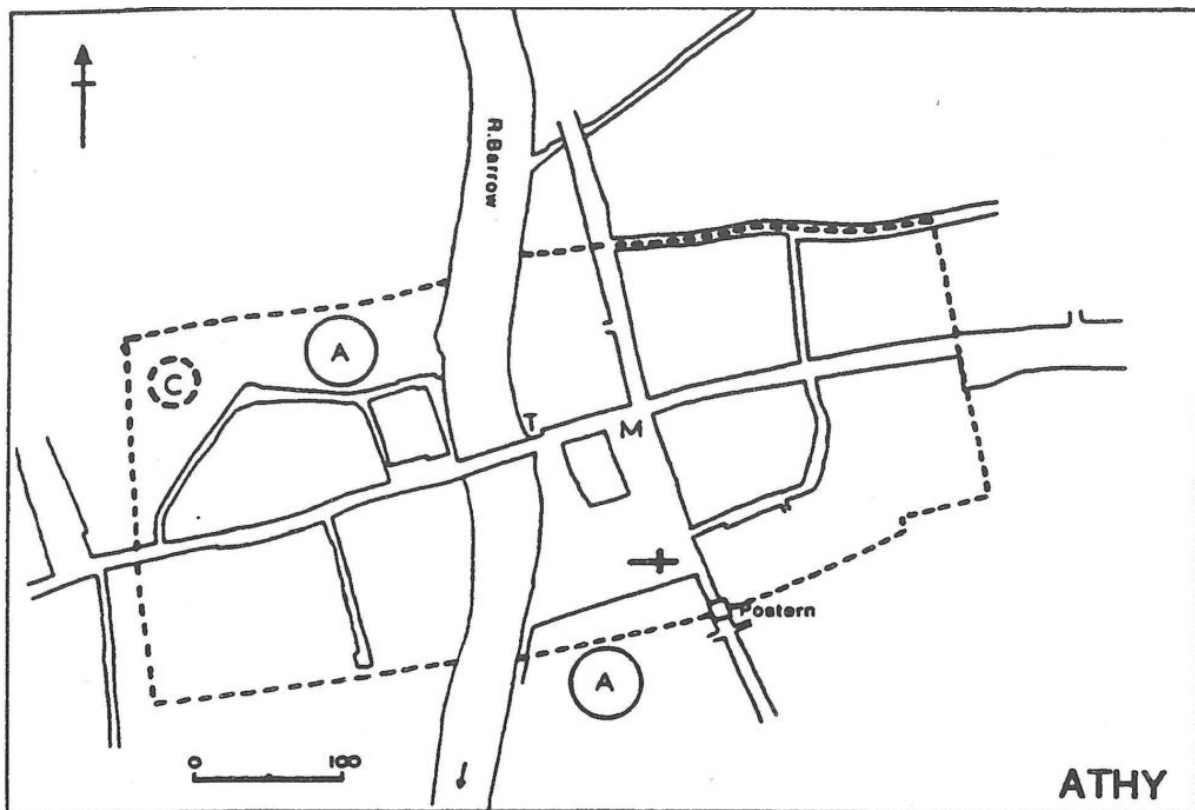


Figure 1: Plan of town wall (source Thomas 1992). Key: A, religious house; C, castle; T, tower house; M, market place.

The town of Athy is situated in the south of Kildare 20 km north of Carlow and 65 km south west of Dublin. The town has developed on a fording point of the river Barrow where it is situated on a basically level site which causes areas of the west bank of the town to be flooded in winter. This fording point has been in use since prehistoric times as indicated by the recovery of a variety of prehistoric objects during the Barrow drainage scheme in 1928. The town's initial foundation came in the mid-13th century with the construction of Woodstock castle in the period 1215-1253 and the establishment of monasteries on the west bank by the Crouched Friars and on the east bank by the Dominicans in much the same period as the castle. Around these main three sites the town evolved into the linear form it is today straddling both banks of the river.

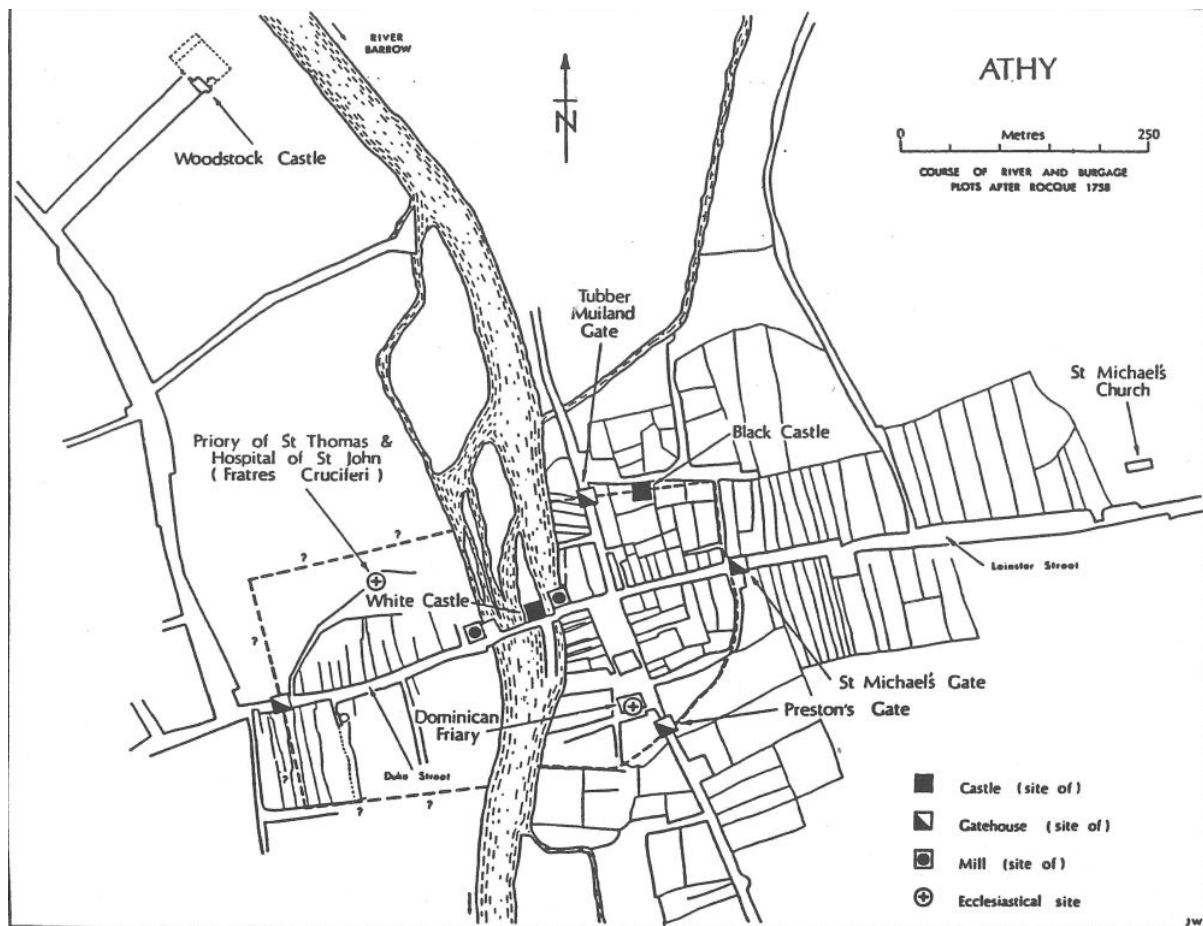


Fig. 2: Plan of town wall (source: Urban Survey n.d.)

Athy, by definition suffers from a dearth of information with regard to the structure and extent of the wall in that the modern town possesses no elements of the wall above ground. Furthermore the lack of archaeological investigation within the town's medieval core has meant that the general layout of the wall is unknown. The possibility for such an investigation is a consideration for the future, as the urban survey conducted in Athy in the mid-1980s indicated the probable existence of archaeological remains which may be garnered with regard to the town walling. There are at present two proposed plans of how the walls may have been laid out, both of which concur at a number of points and their difference predominantly lies in the sources they used for the reconstructions. The layout as proposed by the urban survey is based primarily on the course of the wall as recorded by Henry (1849/1857) while that proposed by Thomas (1992) relies on the study of the layout of the town's streets and burgage plots. Both of these plans are reproduced here (fig.s 1 and 2).

Before commenting on the historical background and references to the wall it is necessary to consider pictorial representations of the town's defences. The town only began to appear consistently in topographical prints in the late 18th century where journals such as the *Anthologica Hibernica* published depictions primarily of either castles in the Athy area, or more popularly, views of White's castle on the bridge at Athy. Perhaps by this period the walls were no longer a strong and salient feature in the town itself and this view may be supported through the study of Rocque's survey of the town. There exists only one depiction of any element of the town wall. In 1837 George Victor du Noyer in the employ of the ordnance survey recorded in watercolours the last remaining element of the walled system, this being Preston's gate. The importance of this drawing is fundamental not only to the acceptance of the definite existence of a town wall but it allows a degree of supposition as to

the extent and orientation of the wall. Preston's gate itself was removed in 1860 when a fatal accident compelled its destruction. On Tuesday the 16th October 1860 the Reverend F S Trench was driving his gig to Athy when his horses took fright, and careering down Offaly Street in the direction of Emily Sq., crashed into the gateway sited at the end of Offaly Street. Both of the occupants of the gig suffered serious injuries with the unfortunate Rector dying on the 23rd November at the age of 74. The Leinster Express reporting the accident isolated the gateway as the culprit and cited it as the cause of many other accidents involving 11 deaths and led a campaign to have it removed. On the 10th of November the editor wrote thus

"Preston's gate Athy- This relic of ancient times is about to be numbered amongst the things that were. On last Monday several workman were employed in throwing down, and ere another week runs round its removal will have taken place. Had it been removed years gone by, it would have prevented the many accidents which its obstruction in the way of the entrance to the town, by the Carlow road, has so often taken place, and none so deplored as the late one, which occasioned the upset to the Rev Mr Trench and his servant, the lives of whom are greatly endangered. Its removal will bring general satisfaction to the townspeople."

Henry (1849/1857) briefly described the gateway.

"On examining the gateway in question it will be evident that the centre part was built long previous to the outer and inner jambs. The centre was originally constructed in a superior manner and of a different description of stone to the outer portions and the foundations of it were not laid so deep as those of the more recent additions."

This description coupled with Du Noyer's watercolour seems to indicate a rectangular gatehouse of a 15/16th century type with a segmental arch.

The town of Athy first appears in detailed cartographic form in Rocques survey of 1756. By this period the town wall excluding Prestons gate has disappeared. The only other representation of Athy and its wall appears on Mercators map of the Leix/Offaly plantation of 1568 where Athy is featured with a wall surrounding the settlement on the East bank. So we can tentatively conclude that walling existed before 1568 and had been virtually removed by 1756. The only other definite representation of the town with walling appears in a pamphlet published in London in 1641 at the behest of Mr Hierome "Minister of God's word at Athigh in Ireland". This publication titled "Treason in Ireland" detailed a variety of atrocities committed by the Irish rebels against the English Protestants there

"...killing them, ravishing the women, cutting them to pieces, hanging them by the haire of the head, scalding them, cutting off their heads, and firing their townes and houses."

The pamphlet concludes with the rebels' defeat at Athy and also an illustration titled "...a description of Athigh ". Unfortunately, although the illustration contains some components of the town, notably the river, church and wall it may be otherwise deemed an inaccurate portrayal of Athy in that period. The drawing is highly stylised showing the town to be surrounded by water on three sides while also the moat-like river is bounded by a star-shaped earthwork (diagnostic of 17th century fortifications). The assumption therefore must be that the illustration was either a standard form available to the publisher and merely adapted for use in the pamphlet, or that the illustrator knew but a few details of the town and then

improvised. It is quite unfortunate that it must be viewed inaccurate but it may be noted that the inclusion of features such as the walling may lend further credence to the walls existence in the 1640s.

Historical evidence may provide more compelling evidence whether through direct or indirect references. The predominant interest in studying Athy is that until the plantation it functioned as a frontier town, a point at which the settlers and native Irish frequently clashed. It was only in the 16th century that it evolved from a military stronghold into an important urban centre. The fortunes of the town vary through the centuries, gaps appear in the historical record at certain points leading to speculation as to the state of the settlement, whether it continued to thrive or it suffered periods of shrinkage and retraction allied with the general position of Anglo /Norman settlement. Athy was quite a recent settlement when the act of parliament of 1297 noted the various assaults by the Irish on the colonists in the marches of Kildare and it recognised the necessity of defensive measures. There further appeared in 1308 the statute of Westminster which was applied to Ireland regarding the closing of town gates from sunset to sunrise. The statute also contained further stipulations regarding the manning of town gates. Perhaps town defence was uppermost in the minds of the inhabitants of Athy after its burning in 1308. The town was burned four more times in the succeeding 70 years which gives an indication of the vulnerability of the town's location on the edge of the frontier. Many of the burnings and plunderings of Athy were carried out by the O'Mores of Leix, one of many strong Irish septs in the region. Athy thus suffered fairly consistent harassment. In September 1358 the Justiciar was seen to be parleying with the O'More and the MacMurrough at Athy. Such discussions were unsuccessful as in July 1359 Ormonde led forces against the O'More. These campaigns only succeeded in the short term as Athy was again burned by the O'More in 1370 and 1374.

This continual harassment of Anglo-Norman settlements had induced a policy of retrenchment by the middle of the 14th century. The policy of withdrawal from more hostile areas to the more easily defended Eastern countryside focused attention on the town as a location of strategic importance. At this time Athy was very much a frontier post in the marches. It is apparent from the late 14th century onwards that the defence of Athy was an important consideration for those who governed it. Due to the frequency of attacks on the town provision was still made for the repairing and construction of fortifications. Sir John Talbot, appointed Viceroy in 1413, was seen to act with much success against the Irish to such an extent that in 1417 when he indicated his intent to return to England due to the Crown's failure to remunerate him for his labours the principal ecclesiastics, nobles and gentry of the Pale submitted a petition to the King. The petition referred to his work in the Athy area, notably his repair of the bridge and his successful construction of a tower at the bridge to resist attackers.

Athy was both vulnerable to attack and yet integral to the defence of many other settlements behind the frontier. It is therefore not unexpected that in 1431 expenses of 100/- were granted to the town for its defence. A further murage reference occurs in 1448 when it is stated that tolls were only to be charged on goods sold within the town and not those carried through. Both these references demonstrate that some measures existed for the provision of town defences and although no definite evidence can be found as to the nature of these defences the assumption must be that some form of murage charter was operative. The vagueness of such details are problematic in ascertaining the extent and nature of the defences prior to the Charter of 1515. This Charter granted by King Henry the VIII is the clearest and only real concerted record of the attitude to town walling with regard to Athy. The Charter is quite explicit in assigning to the town the nature of its administration and its

attendant rights and privileges. Throughout this document there are frequent references to the walling of the town. Obviously the wall and its construction were integral not only to the defence but to the dignity of Athy. Within the Charter licence was given to the inhabitants of the town

“...that they may erect construct build and strengthen the same town with fosses and walls of stone and lime”

It also stated the means by which the walls' construction and their continuing maintenance would be funded. The reason for the provisions for the wall is as the charter states to do so

“...in opposition to the malice of our Irish enemies...”

The following levies or tolls were suggested for revenue collection:

- 1 penny for every horse sold in the town 1 penny for every cow sold in the town
- 1 penny for every horse load of boards
- 1/2 penny for every hide sold in the town
- 1 penny for every body of car put to sale
- 1 penny for every pair of wheels sold in the town
- 1/2 penny for any merchandise worth 2 shilling
- 1 penny for any good worth 5 shilling

There was also the proviso that reasonable account be rendered to the Earl of Kildare who

“...assigns how and in what manner the aforesaid provost shall distribute or expend the said customs and profits on the building and repair of the walls fosses and pavage”

The charters contents thus leave to the administrators of the town the right to levy taxes or impose custom duties to provide for the building and repair of fortifications in the town. The town is responsible for its own defence while the provost of Athy is directly answerable to the Earl of Kildare. The charter is integral to the history of the wall as it forms the only definite evidence for the impetus behind the walls construction. Both before and after the charter no reference may be found to its construction, extent or its success. Neither the charters of 1613 nor that of 1688 refer to the walling. Apart from Mercators map of 1568 we are uncertain as to the state of completion it ever reached. Thus the charters proposition of the wall as a necessary dynamic in the town may not have ever been realised.

In 1532 Ossory, in a communication with Thomas Cromwell the Lord Privy Seal referred to the

“...gates of the Earls (Kildare) town of Athye...”

However, it is clear that whatever defences were built from 1515 they were not proof against attack. In 1546 O'More attacked Athy burning the town and the monastery. Anthony St Leger following the attackers into Offaly left a substantial garrison in the town composed of 100 horseman, 100 musketeers, 100 battleaxe men and 100 soldiers. Strategically Athy was still very important, a consideration which found the Lord Deputy present between August and November 1548. The establishment of the plantation in the mid-16th century put renewed stress on Athy as a military stronghold. The defence of Athy was integral to the success of the

plantation as resistance to it was quite strong with the Irish engaging in many retaliatory measures. Athy became a vital supply link to the beleaguered English settlers of Leix/Offaly.

There lies a common difficulty in interpreting early documents not only in ascertaining the veracity of details but also the degree of bias inherent in them. When a town is described as being /burnt/ and 'plundered' certain doubts must be entertained as to the degree of destruction. What some writers may represent as a raid others may portray as a scene of raping, plunder and slaughter. Likewise references to the walling are retarded not only by their scarcity but also by their lack of detail. The vulnerability of the town to attack is consistent throughout the 14th, 15th, and 16th centuries. This also encourages questions as to the quality and the extent of the walling. Although the military importance of the settlement continues into the 17th century it is interesting to note that writers such as John Dymok in his "*Treatise on Ireland*" in 1600 gives a description of Athy with no reference to walling.

"Athie is divided into two partes by the ryver of Barrow over the which lyeth a stone bridge, and upon it a castle occupied by James Fitzpierce,...the bridge of the castle... being the onely waye which leadeth into the Queene's county."

Dymok further described a town which because of the wars initiated by the rise of the O'Neills had been beggared low. In the advance of Essex's army of 1599 he mentions Athy as

"A great market towne, but brought by these late wars into the state of a pore village u."

Again in 1598 an anonymous writer referred to Castledermot and Athy as the: "*only important towns of Kildare, walled and now ruined*" (Hogan 1878).

Perhaps with the frequency of conflict the town may have been reduced to an impoverished state and it may account for the walls possibly never acquiring a complete state so that they may never have rendered truly effective defence to the town. Medieval walling no matter how strong could always fall to a determined and aggressive attacker. One could further conclude that the west bank of the town as portrayed in Mercator's map may never have been walled. The bridge at Athy acted as the passage into Leix and it would seem that the bridge could be more easily held and defended if only one bank of the river was walled. A force concentrated on one bank of the river would be more practical than one having to straddle both banks. The existence of the towerhouse at Woodstock would function to cover the northern approach to the town while it may be noted that castles at Ardreich and Grangemellon to the south and at Rheban to the north of Woodstock and the town would form a loose chain of defence for the frontier. These castles must not only be considered as centres of manorial power but also as bastions of defence.

This study shows the difficulty of utilising historical evidence when there is an absence of archaeological fact and this lack necessitates wariness when historical records form a dominant aspect of the argument. The last great upheaval in the town prior to its enhanced urban development in the 17th, century was the assertion of Irish interest against the English oligarchy in the 1640s with the confederation of Kilkenny. The woodcut illustration published in 1641 was probably prophetic in portraying the town being bombarded with cannon ball. The age from which walling was derived was long dead, long rendered ineffective by the increasing sophistication in weaponry, and perhaps Milton's jibe at the Royalist forces was more apt then even he could have imagined.

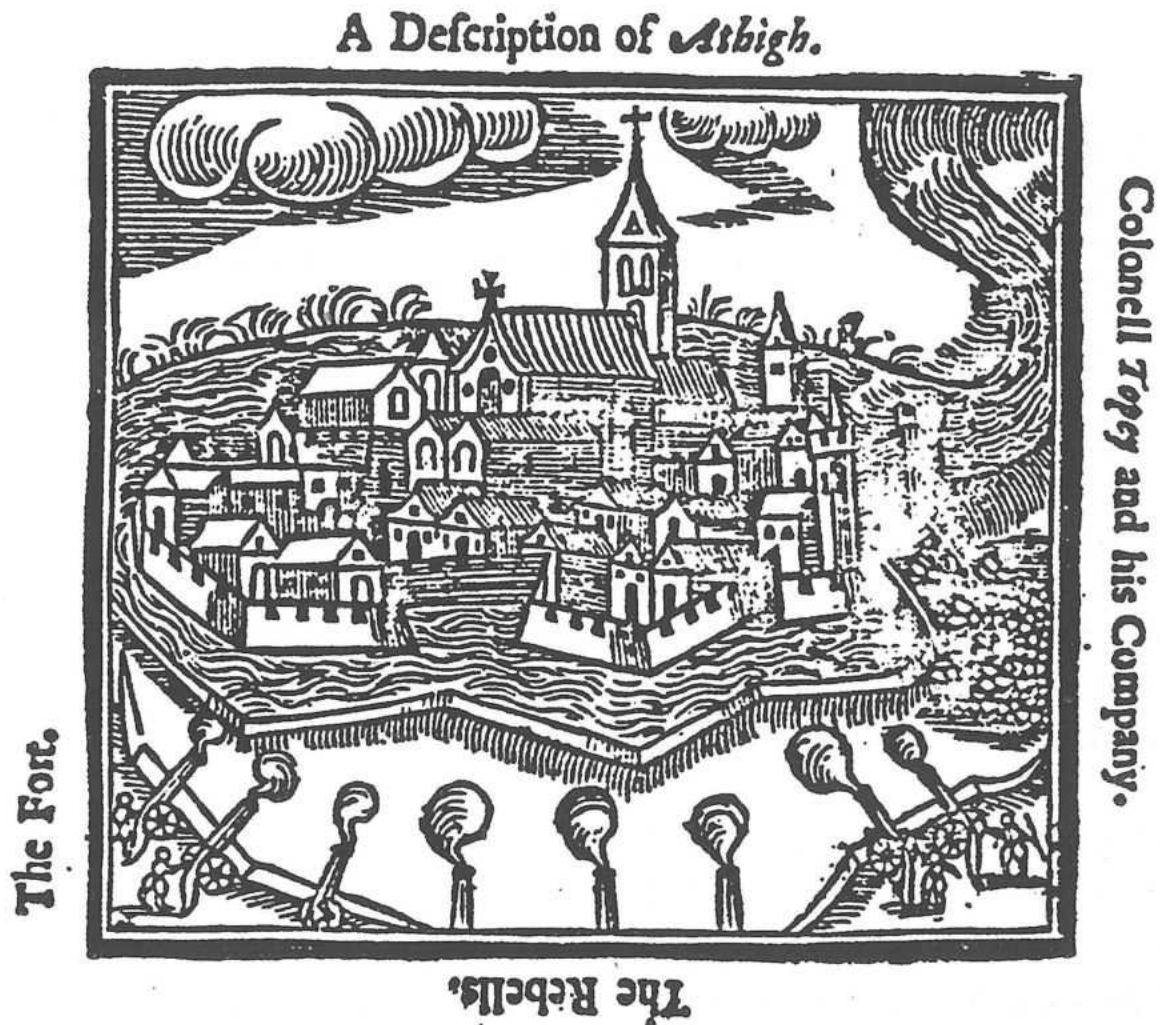


Fig. 3: Woodcut portrayal of 1641 siege of Athy

NOTE 1: The transcript of the charter of 1515 came from the papers of Lord Walter Fitzgerald currently lodged in the National Library of Ireland.

NOTE 2: I have for the purposes of brevity omitted a variety of historical references most notably those that allude to the Bruce invasion of Ireland 1315-1318. I also felt it unnecessary to dwell on the details of revolts such as those of Silken Thomas in 1534-5 when Athy functioned as a stronghold for the rebels. These references only serve to again emphasise Athy's strategic importance.

NOTE 3: Quotes in the text which are not directly referenced are based on the ongoing research of Mr Frank Taaffe.

Acknowledgements:

I am indebted to my father, Frank Taaffe, without whose work on the history of Athy this article would not have been possible. All mistakes, omissions and interpretations are my own.

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A “Square Earthen Church of Clay” In Seventh-Century Mayo

Cathy Swift

“The study of the past obviously includes material and written sources where both are available but each branch, written source or material, is a different and separate study with its own data, methods, objects and conclusions. The study of the past will benefit as the two sub-disciplines develop their own studies because then, in any historical period, there are two independent sources. The study of the past will lose if the two disciplines which could prove independent evidence join in an interlocking form of circular argument, each making out a case by reference to the other” (Reece 1984, 113).

This paper sets out to explore the historical context behind the description of a Mayo church which is to be found in a 7th century tract, claiming to deal with the last miraculous deeds of St. Patrick’s life. It is hoped that this will prove helpful in constructing archaeological models about church form, in Ireland during this period.¹

The tract in which the description is found is known to modern scholarship as Tirechan’s *Collectanea* and is available in a recent edition by Bieler (1979, 124-163). The single exemplar which survives is found in the 9th century Book of Armagh where it forms part of a collection of Patrician lore, collected into the front of a small devotional handbook intended for use by the Abbot of Armagh (Sharpe 1982, 5). By that date the text had apparently been copied on a number of occasions, indeed, it may only survive in a mutilated state in the manuscript (Bury 1902, 268; Gwynn, J, 1913, lviii; Mac Neill 1928a, 14, 18; 1928b 94-95; Kelly, in Bieler 1979, 244-5; Sharpe 1982, 14-18; Picard 1985, 80).

Tirechan was writing about Patrick’s activities long after the saint was dead, when little was known about Patrick himself but when his cult was active and, apparently, prestigious. Tirechan states that, if he wanted to, Patrick’s heir could claim

“...almost the whole island as his domain because God gave him the whole island with its people through an angel of the Lord...All the primitive churches are his... [in consequence]...it is not permitted to swear against him, or overswear him, or swear concerning him and it is not permitted to draw lots with him...”

(Bieler 1979, 138-9).

Tirechan was writing as a propagandist for Patrick’s cult and his words are presumably to be read as an expression of the cult’s ambitions rather than necessarily representing concrete achievements. That Tirechan felt in a position to claim such wide-ranging powers is in itself, however, an important indication of the status of the Patrician clerics.

Despite the use of the word *mirabilia* [miraculous deeds], to describe Patrick’s activities (Bieler 1979, 126-7), he performs few miracles in the *Collectanea*. He opens a grave and speaks to the dead (Bieler 1979, 154-5), he blesses a river and curses another (Bieler 1979, 160-1) and on three occasions he defeats druidical magic through prayer (Bieler 1979, 130-1, 138-9, 156-7). There is also an account of fiery sparks emanating from the saint’s mouth and alighting on those of other individuals (Bieler 1979, 162-3). On the whole, however, Tirechan’s Patrick appears to be a remarkably pragmatic individual, with little of the shaman about him. The major emphasis in the text is on Patrick’s role as a church founder

and descriptions of his foundations, together with notes on their subsequent history, take up roughly two-thirds of the surviving tract.

One such foundation is that associated with the site of “...*Foirrgea filiorum Amolngid...*” (Foirrgea of the sons of Amalgaid)². Bieler’s translation of the relevant passage runs as follows:

“And behold, Patrick proceeded to the land [ager] which is called Foirrgea of the Sons of Amolngid to divide it between the sons of Amolngid and he made there a square earthen church of clay, because no timber was near. And they brought to him a sick woman who was pregnant, and he baptised the son in his mother’s womb (the woman’s liquid served as the son’s baptismal water) and they buried her on the hill of the church above and the holy man’s seat is beside the church to the present day.”

(Bieler 1979, 158-9).

According to Tirechan, one of the sons of Amalgaid came from “...*the western plagæ [districts] in campus Domnon [Mag Domnon] and the Wood of Fochloth...*” (Bieler 1979, 134; author’s translation). Tirechan also states that the sons of Amalgaid, as a group had their “...*regiones propria...*” [own region(s)] “...*across the river Moy...*” and he implies that they held authority “...*all over Mag Domnon...*” (Bieler 1979, 156-7).

Campus Domnon or Mag Domnon, as a placename, is found in a number of Early Medieval texts. Adomnan, for example, declares that Cormac mac Lethan came from that *regio* [district] beyond the river Moy which was known as Eirros Domno (Anderson 1991, 30-1). The author of the *Táin Bó Flidais* identifies a warrior-race known as the *Gamanrad a hIrrus Domnand* (Best & Bergin 1929, 57). In *Fled Bricrend*, Urros Domnand is one of a number of places visited by Cii Chulainn (Best & Bergin 1929, 257). Irrus occurs as a placename in the Annals of Connacht under the years A.D. 1242 and A.D. 1273, a name which becomes Erris in the 16th century *Composicion of Conought* and eventually modern Erris, now used to describe the barony west of Tirawley (Freeman 1936, 96, 102; 1944, 76-7, 160-1). Since the two 7th century authorities link Domnon with the Moy while two pre-9th century texts identify the area with Erris, one is led to the conclusion that the term probably embraced both regions in Tirechan’s day and that the territory of the sons of Amalgaid stretched beyond that of the modern barony which bears their name Tirawley (land of the Ui Amalgaid 1) to Erris and the north-west Atlantic coastline.

Bieler’s translation of the foundation-story of Foirrgea ignores an ambiguity in the original Latin: he assumes that the division is that of Foirrgea itself. It is equally possible that Foirrgea is merely the scene for the division of Amalgaid’s lands which had been decreed by Loiguire at Tara in an earlier episode:

“...Loiguire and Patrick passed judgement that they should divide their inheritance into seven parts...”

(Bieler 1979, 134-5)

Such a division by sons of their father’s lands was a normal preliminary to inheritance, the vernacular laws explain that a man’s property was divided amongst his offspring by the youngest and each, beginning with the eldest, then took his choice (Binchy 1979, 1289.2; Kelly 1988, 102-5). The story represents Tirechan’s interpretation of the political background to the control, in the 7th century, of Mag Domnon by a number of families who claimed

descent from a single progenitor, Amalgaid. Writing as a Patrician cleric, he represents this ancestral division as having taken place under the auspices of St. Patrick.

The early law tract *Cetharslicht Athgabdlá* states that three noble tribes passed a judgement at a *dál criche* [territorial meeting] and divided Ireland between them (Binchy 1979, 356: 5-6; Hancock et al. 1865-1901, i, 79). Elsewhere, later commentators identify a *dál* with an *oenach* [popular assembly], a ritual gathering which took place at fixed sites of ceremonial importance (Bannerman 1974, 166; Hancock et al. 1865-1901, v, 396). In Connacht, the most famous of these sites was Cruachu, modern Rathcroghan, (Best & O'Brien 1929, 268), but a number of others are witnessed in the documentary sources (Hogan 1910, 558-9). If a *dál criche* was the scene of both discussions about territorial divisions and *oenach* assemblies it implies the sites where such divisions were promulgated were of considerable prestige. This is also implied by the 10th century translation of Tirechan's text into Irish, which replaces the story of the division of a land at Foirrgea with the statement that the seven leaders of the Uí Amalgaid were converted there:

[Patrick] “...went into Forrach mace nAmalgodo and Amalgaid's seven sons believed in him, together with Énda and the king...”

(Stokes 1887, 84-5; Mulchrone 1939, 49-50).

This conclusion can be supported by the name Foirrgea/Forrach itself, for this placename element is closely associated with prestigious sites in other Patrician documents. In the 8th century *Additamenta*, for example, it is used to describe the site of Domnach Féic, the church which Patrician apologists claimed as the central church of the Uí Cheinselaig kingdom (southern Leinster) at this period (Bieler 1979, 176-7). In an episode found solely in the *Vita Tripartita*, Patrick replaces the area of *atribalbile* [sacred tree] with a site known as Forrach Patraic (Stokes 1887, 188-9; Mulchrone 1939, 114). It seems likely, therefore, that Tirechan's “...square earthen church...” at Foirrgea was located on a site considered to be of some ritual or political importance to the kings of the Uí Amalgaid in his day.

The description of the church has been used by scholars attempting to identify early forms of church architecture in Ireland (Henry 1940, 49; Hamlin 1984, 118; Lynn 1978, 38). Those who have compared this description with archaeological remains have suggested a structure built of turf sods. Only one such building and that apparently a domestic one is known from an excavated site. The structure was found in Rath III at Dunsilly, Co. Antrim and is described as:

“...a 7m square sod-walled house built against the inner edge of the bank. Probably lined by a wooden bench but it had no internal hearth or posts...”

(McNeill 1976, 6).

Dr C J Lynn has suggested (*pers comm.*) that it seems unlikely that such a building could have stood for any length of time as an independent structure. It remains to be seen whether we should imagine a sod-built church as being a feature of 7th century Ireland.

Tirechan himself indicates that buildings of this type were not considered the norm when he explains that the reason for its construction at Foirrgea was due to its location: “...because no timber was near...”. The inherent implausibility of this statement has not been stressed by other scholars. However, it is worth noting that the site is listed in the same paragraph as, and immediately after the description of two churches “...in the Wood of Fochloth...”. This is not obvious in Bieler's edition but is apparent in the facsimile edition of the Patrician documents from the *Book of Armagh* (Gwynn, E, 1940, 14v). It is true that Patrick travelled (the verb is

perexire) from the sites “...in the Wood of Fochloth...” to Foirrgea but the onomastic evidence suggests that it is unlikely that he travelled far. Foirrgea is probably to be associated with the 17th century townlands of Farry and Mullafarry, immediately to the south-west of the churches in the Wood of Fochloth (Simington 1956, 190). In conjunction with the evidence of the 10th century *Vita Tripartita*, these can be identified as the “...*æclessia magna patricii*...” [great church of Patrick], “...*Cros Patraicc*...” [Cross of Patrick] and “...*Cell Forglan*...” (Stokes 1887, 130-7; Mulchrone 1939, 81-4).

Furthermore, we have early accounts of wood being borne over great distances. For instance, when the monks of Iona were building their long ships they imported their wood from the mainland, in the form of *dolotæ* [dressed timbers] which they floated behind their ships. On a second occasion, wood was floated down the “...*flumen Sale*...” [river Sale] (Anderson 1991, 174-5). In an undated life of St Samthann, who died in A.D. 739, carpenters travelled from Cluain Bronaig (in modern Longford, close to Ardagh) to the lands of the Connachta in order to find *ligna* [posts] of pinewood which they transported home in carts drawn by oxen (Plummer 1910, ii 257).

We have evidence, therefore, that suggests that Foirrgea was an important site in the territory of the Uí Amalgaid. It was situated immediately to the south of the Wood of Fochloth and, on onomastic evidence, was less than three miles from the estuary of the Moy, the most important river in north-west Connacht, navigable up-river of Foirrgea (Greer 1986, 154). And on this site of ritual and political importance we have a church built of clay, a most unusual building material considering the proximity of the Wood of Fochloth.

It is interesting to compare the site of Foirrgea with the other earthen church mentioned by Tirechan: the “...*earthen church*...” located by the royal *fertæ* [burial mounds] of Loiguire’s two daughters on the ceremonial site of Cruachu (Bieler 1979, 142-5). The burial of these two girls is particularly interesting as it is explicitly linked with a pagan ritual:

“...they buried them beside the well of Clibach and they made a round ditch after the manner of a *ferta(e)* because this is what the heathen Irish used to do...”
(Bieler 1979, 144-5).

A number of parallels concerning the histories of both sites can be noted. Firstly, the lack of personnel associated with either church is an unusual feature of Tirechan’s work; he is normally careful to stress St Patrick’s links with the ancestors of the 7th century clerical families, who controlled his foundations. Secondly, at both sites female burials are recorded as having taken place: Loiguire’s two daughters at Cruachu and the unnamed female at Foirrgea. Therefore, both earthen churches are associated with female graves, at important centres.

The example from Foirrgea is further associated with a feature known as Patrick’s *sedes*, a type of monument which Tirechan also locates at the “...*halls of the sons of Brion*...” at Dumae Selcae (Bieler 1979, 145-6). *Sedes* would appear to be a translation of the Irish *forad* [seat], a platform associated with the holding of *óenach* assemblies. From a number of early sources, the compilers of the Dictionary of Irish Language identify a *forad* as follows:

“A mound or platform, probably in most cases of earth, used as a seat or stand for spectators but also as a post of outlook; it varied in size and shape, being often large enough to accommodate a number of persons but sometimes apparently intended for only one; it may in some special cases have been circular; at the great interprovincial assemblies each king had a special *forad* and there seems to

have been a forad set apart for women. There was sometimes a forad in or close to a chief's dún."

(Joynt & Knott 1957,304)

The seating platforms at the interprovincial games were places of great importance for it was only those ceremonies which took place in full view of the spectators which received ratification from the tuath [tribe]. It was a mark of the great honour in which the Airgialla were held by the Uí Neill kings, for example, that the *forad* of Airgialla kings was said to be situated on the right hand of the king of Tara (Dillon 1962, 76-7). The evidence for Foirrgea, therefore, is not only that the earthen church was located at an important site belonging to the Uí Amalgaid federation but also that it was associated with the most prestigious part of that site. The evidence for Foirrgea, therefore, is not only that the earthen church was located at an important site belonging to the Uí Amalgaid federation but also that it was associated with the most prestigious part of that site. Such a location for a sod-built church associated with the burial of an unknown female demands explanation.

One possible answer might lie in the nature of the activities which took place at the ceremonial sites. There is late evidence that both Dumae Selcae and Cruachu functioned as inauguration centres for the kings of the Uí Briuin and the Connachta respectively (Duignan 1934, 103; Best & O'Brien 1957,461). As has been noted, the division of the patrimony of the sons of Amalgaid and the 10th century location of the conversion of the Uí Amalgaid at Foirrgea, both suggest that it, too, had a prestigious and possibly royal function.

Adomnán, in his 7th century biography of St. Columba, describes the identification of Aedanmac Gabrán as a future king of Dál Riata with the statement that Columba laid his hand over the king's head and "...ordinans, benedixit..." [he ordained and blessed him] (Anderson 1991, 188-9).

The vernacular legends of roughly similar date, on the other hand, linked the choice of a king with prophecies which took place at a *feis* [feast]. This could be of varying forms, in both *Togáil Bruidne Da Derga* and *Óenét Emire*, the *tarb-fheis* consisted of a ceremony in which a druid ate the meat and broth of a bull and then lay down to sleep and dream of the future king (Knott 1936, 4; Dillon 1953, 9). In a text known as *De Shíl Chonairi Móir*, which survives in three recensions of the 15th century, the future king of Tara is the only man able to drive a chariot between two closely placed stones and rub his wheel against the stone penis of the Lía Fál:

"There were two flag-stones in Tara: 'Blocc' and 'Bluigne'; when they accepted a man, they would open before him until the chariot went through. And Fdl was there, the 'stone penis' at the head of the chariot course?); when a man should have the kingship of Tara, it screeched against his chariot-axle, so that all might hear. But the two stones 'Blocc' and 'Bluigne' would not open before one who should not hold the sovereignty of Tara and their usual position was such, that one's hand could only pass sideways between them; also he who was to hold Tara's kingship, the Fál would not screech against his axle."

(Gwynn, L, 1912,134,139)

References to these stones are also found in the 12th century *Book of Leinster* and in the *Dindshenchus* of Tara, dating to roughly the same period (Best *et al.* 1954,122; Gwynn, E, 1903,20; 1935,3-114).

The overt sexual symbolism of this account is reflected by other tales such as *Tochmarc Emíre* where the ceremony is described as *ban-fheisrige* and is marked by a great feast (Van Hamel 1933, 41). Just as a *tarb-feis* is a 'bull feis', *ban-fheis* is literally a 'woman feis' a term which, in Old Irish (prior to the 9th century), could be used to translate the Latin *nuptiae* [wedding] (Stokes & Strachan 1903, ii 38). In a much later *ban-fheis*, deliberately designed as an antiquarian ceremony by a pretender to the kingship of Connacht in 1310, some of the action took place at night:

"And when Fedlimid mac Aedameic Eogain had married the Province of Connacht this foster-father waited upon him during the night in the manner remembered by the old men and recorded in the old books; and this was the most splendid kingship marriage (banaisrige) ever celebrated in Connacht down to that day."

(Freeman 1944, 221-2).

The twin elements of feasting and sleeping which appear to be a feature of both ceremonies, are encapsulated by the word *feis*, a word which, as MacCana (1955-6, 86) pointed out, can be translated by either activity. The actions of the two daughters of Loiguire, whom Tirechan associates with the earthen "...church..." at Cruachu, are described in the same terminology as that of the dreamer in the *tarb-feis*; like him they taste food, see their future (connubial) lord and fall asleep:

"And they demanded to see the face of Christ, and the holy man said to them: 'Unless you taste death you cannot see the face of Christ, and unless you receive the sacrament'. And they answered: 'Give us the sacraments so that we may see the Son, our bridegroom', and they received the Eucharist of God and fell asleep in death."

(Bieler 1979, 144-5).

In Tirechan's account, the daughters have apparently just emerged from their period of fosterage for they are accompanied by their fosterers, the druids Caplit and Mael, and yet act independently of them (Bieler 1979, 142-5; Kelly 1988, 86-90). The description in *De Shíl Chonairi Móir* appears to symbolise the breaking of the hymen. It may be, therefore, that the normal female protagonist in a *ban-fheis* was thought to have been a virgin.

The parallels between the various accounts lead one to infer that the story of the two daughters may represent a Christianised version of a *ban-fheis*. In its pagan form, this appears to have involved sleeping with a young girl and dreaming of the new king. In the next generation, the Irish compilers of ecclesiastical law stressed the need to abandon the pagan *feis*, to turn to Christian methods of inauguration and to condemn the use of auguries and divination (Wasserschleben 1885, 76, 230-2). The *Collectanea* account of the two maidens may represent an earlier stage in the fight against the *feis* when the Church still acknowledged the pagan ritual but clothed it in a Christian guise.

Using this model, one might suggest that the earthen buildings associated with females at the ceremonial centres of both Cruachu and Foirrgea, may once have had a role to play in the *ban-fheis* ceremonies. Some sort of shelter for the seer where he might have ritual intercourse with a virgin and then sleep is a possibility. In the early version of *Cath Maige Tuired*, the poet of the Tuatha De came visiting the king of the Fomorians:

"Once upon a time the poet [file] came a-guesting to the Bres's house, even Corpre son of Etain, poet of the Tuatha Dé. He entered a cabin narrow,

black, dark wherein there was neither fire nor furniture nor bed. Three small cakes and they dry were brought to him on a little dish. On the morrow he arose and he was not thankful. As he went across the garth[les] he said: 'Without food quickly on a dish; without a cow's milk whereon a calf grows: without a man's abode under the gloom(?) of night: without paying a company of storytellers, let that be Bres' condition.'"

(Stokes 1891, 70-1)

The poet slept in a small dark place within the king's fort and as a result of this experience, he prophesied the future fate of the king. The straightforward interpretation of this text is that the poet is merely disgruntled with the lack of royal hospitality; one might, however, note the coincidence of poet/seer sleeping in a small, dark place and prophecy. It is conceivable that this is a literary reflection of the type of shelter provided for the seers in feis ceremonies.

This is one possible model for the interpretation of Tirechan's "...square earthen church...". It fits with what we know of Christian attitudes to pagan sites in this period; Pope Gregory the Great, whose works were apparently much studied in 7th century Ireland, wrote careful instructions to the Anglo-Saxon missionaries that they were to convert pagan temples to Christian use (Colgrave & Mynors 1969, 106-9; Walsh & Ó Cróinín 1988, 82-3). On the other hand, it may be that this interpretation strays too far from the explicit evidence in Tirechan's text. The interaction between literary references and the study of material culture is, as yet, under-developed in medieval Irish studies and it is quite possible that the suggestions put forward here will have to be abandoned at some future date.

The mere fact that one can construct such a model, however, is a useful reminder to the archaeologist. Even seemingly straightforward descriptions in Early Medieval documents need to be evaluated carefully before incorporating such evidence into archaeological interpretations. The documentary sources which survive from the Early Medieval period represent the activities and thoughts of a very small part of the population, engaged in a luxury activity, for motives which are almost invariably obscure. The reliability of such sources and the extent to which they can be used in archaeology without resulting in "...an inter-locking form of circular argument..." remain a point for discussion.

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Notes:

1. Because of considerations of space, all quotations are given in English translation. However, the references are to both the editions of the original texts and to the translations.
2. The Irish words in Tirechan's text are written in a 7th century orthography (Kelly, in Bieler 1979, 242). This is earlier than the majority of Old Irish texts and the spelling is consequently different from that found in later manuscripts such as the *Vita Tripartita*. I have chosen here to use the forms of proper and tribal names provided by O'Brien (1962) although this, on occasion, differs from that provided by Bieler.

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The megalithic art of Site 1 at Knowth and its context in Ireland.
- The fortified town houses of the English Pale in the Later Middle Ages.
Clay casting moulds of the Early Historic period in Ireland.
The construction, context and use of round houses in Early Christian Ireland.
Rounded scrapers of the Neolithic and Earlier Bronze Age in Ireland.
The Medieval fortifications of County Wicklow.
Raths as a component of settlement in the Dublin region.
Craft production and consumption in Ireland, 200-1200 A.D.
- Irish logboats.
Medieval fonts in Counties Dublin, Kildare and Wicklow.
Irish Medieval weapons, 1170-1600.
Irish Early Christian glass bracelets.
- Cattle in thirteenth century Dublin, an osteological examination of its remains.
Medieval settlement in County Carlow, c.1170 - c.1550.
- Pre-bog archaeology: the Glenamoy – Barnatra Peninsula, Co. Mayo.
Amber from the Wood Quay / Fishamble Street excavations 1973 to 1981.
Undecorated freestanding crosses of the Early Christian Period in Ireland.

- BYRNE, Margaret J B,
KEELING, David,
NEWMAN, Conor J,
BRADY, Niall D K,
O'CONOR, Kieran,
O'CARROLL, Finola,
1987
BOURKE, Edward C,
*NEWMAN, Conor J,
WREN, Joanna M,
DUFF, Joan,
1988
O'ROURKE, Ddire,
STIERLE, Karine,
1989
FARRELLY, Jean,
KE ANE, Margaret,
LOUGHRAN, Amanda,
MEDLYCOTT, Maria,
MOLONEY, Aonghus,
MOUNT, Charles,
MOYNIHAN, Roderick,
Ó CIARDHUÁIN, Seán,
OPIE, Hilary F,
1990
DILLON, Fiona F D,
GRANT, Christine,
O'SULLIVAN, Tanya M,
RYAN, M Frank,
1991
- The pre-bog archaeology of the Ballycastle - Palmerstown area of north Mayo.
The megalithic tombs of south west Co. Donegal: an environmental perspective.
The archaeology of Ballinderry Lough, Co. Westmeath.
The plough in Early Historic and Medieval Ireland.
The Anglo-Norman period in County Laois.
Irish basal-looped spearheads.
Glass vessels in Ireland c. 100-1400A.D.
Decorative bronzework of the late 6th century from Ballinderry II
Crested ridge-tiles from Medieval towns in Leinster 1200-1500A.D.
Aspects of Early Christian, Irish, house-shaped shrines.
Leather footwear from Viking Dublin.
The leaf-shaped projectile heads of the Irish Neolithic.
A sample study of ringforts in Co. Leitrim.
An archaeological survey of the basin of the River Deel, Co. Mayo.
Iron Age cauldrons in north-west Europe.
Standing-stones in central Leinster.
The archaeology of wooden trackways in Lullymore Bog, County Kildare.
Early Bronze Age burials in Southern Leinster.
The horse motif on Irish high crosses of the Early Christian period.
An archaeological survey of the Medieval parish churches of County Wexford.
The Early Christian church sites of north County Wicklow.
An analysis of two lithic collections.
A locational analysis of the megalithic tombs of the Burren, Co. Clare.
The exploitation of birds in Viking Dublin (An avifaunal analysis of a bone sample from Fishamble Street 2).
The craft of the cooper in tenth and eleventh century Dublin an examination of the domestic evidence.

CROSS, Sarah,	An intensive survey of the early prehistoric archaeology in the environs of Fourknocks Co. Meath.
DALY, Aoife M,	A tree-ring study for Viking Dublin: a new chronology from Ash(<i>fraxinus excelsior L.</i>).
DONAGHY, Caroline,	Barrel padlocks and their keys in Ireland.
FITZGERALD, Maria,	Dress styles in early Ireland (c 5 th - c. 12 th A.D.).
KILFEATHER, Annaba,	Patterns in Early Bronze Age society a study of aceramic grave goods in Ireland.
MURPHY, Donald,	The Early Christian monasteries of Co. Louth.
O'SULLIVAN, Aidan,	Prehistoric woodworking techniques: the evidence from excavated trackways in the raised bogs in Co. Longford.
1992	
GUINAN, Bernard P,	Ploughzone archaeology in north Dublin the evidence from a lithic collection and a fieldwalking survey.
HEALY, Antonine,	Evidence of the terminal decline of Pine forest in north Mayo: it's relevance to the environment and chronology of Neolithic settlement at Céide Fields.
Mac DONAGH, Michael,	Stone arrangement and stone use in the megalithic tombs of N.-E. Co. Mayo.
MURRAY, Cara,	The promontory forts of Leinster: and an assessment of their function.

Theses Submitted for N.U.I. Travelling Studentships in Archaeology

(non-U.C.D. Students)

1972	
BARBER, John W, (UCC)	The stone circles of Cork and Kerry: a study.
1975	
TWOHIG, Dermot C, (UCC)	An assessment of archaeological cave research in Ireland.
1976	
Ní LOINGSIGH, Áine, (UCC)	The stone alignments of Counties Cork and Kerry.
1980	
CLEARY, Rose M, (UCC)	The Late Neolithic/Beaker period ceramic assemblage from Newgrange, Co. Meath, Ireland- a study.
1984	
POWER, Catryn, (UCC)	Antropological studies on the dental remains from some Irish archaeological sites.
SHEEHAN, John G, (UCG)	Viking Age silver arm-rings from Ireland.

M.Phil and other Theses Held in the Department

1975		
HICKS, Ronald E,	Some henges and hengiform earthworks in Ireland: form, distribution, astronomical, correlations and associated mythology.	(Ph.D., Un. of Pennsylvania)
1981		
BURNS, Agnes J,	Scholastic oghams.	(M.Phil)
1984		
O'SULLIVAN, Orla V,	Buckles of the First Millennium A.D. from native Irish sites.	(M.Phil)
CASEY, Stephen,	Early Medieval representations of books from Ireland and the Irish milieu.	(M.Phil)
O'BRIEN, Elizabeth,	Late Prehistoric - Early Historic Ireland the burial evidence reviewed.	(M.Phil)
1991 FINGERHUT, Terry A,	Honestones from Fishamble Street, Dublin.	(M.Phil)

Doctoral Theses Held in the Department

1953		
De VALERA, Ruaidhri,	The court cairns of Ireland.	
1954		
Mac DERMOTT, Máire,	The Kells crozier and the "hiatus" in 9th - 10th century Irish metalwork.	
1965		
HERITY, Michael,	Irish megalithic grave goods: problems of context, interrelationships and origins.	
1975 KAVANAGH, Rhoda,	Irish cinerary urns and Early Bronze Age burial rites.	
1976		
CAULFIELD, John James,	The cultures and economy of the Irish Iron Age.	
1977		
RAFTERY, Barry J,	The Irish Iron Age: problems of origin, development and chronology.	
1986		
LYNN, Christopher J,	Houses and related outbuildings in Early Christian Ireland.	
1987		
COONEY, Gabriel,	North Leinster in the earlier prehistoric period (7000-1400bc), a settlement perspective on foragers, farmers and early metallurgists.	

1988

O'SULLIVAN, Muiris,

Irish passage tomb art in context.

1989

GROGAN, Eoin,

The early prehistory of the Lough Gur region,
Neolithic and Early Bronze Age settlement patterns
in north Munster south of the River Shannon.

1990

KELLY, Dorothy,

Aspects of Irish high crosses.

1991

O'KEEFFE, Tadhg,

The Irish Romanesque style in architecture and
architectural sculpture.,

NOTE: Theses in the M.A. list marked * were also submitted for the N.U.I. Travelling
Studentship in archaeology

Editors' Comment:

In this year's volume of *Trowel* we publish a complete list of post-graduate theses held in the Department of Archaeology, University College Dublin. We hope that this will be a contribution to the history of Irish archaeology as well as being a practical help to those doing, or starting out to do, research with regard to which topics have been studied and which have not.

The idea of publishing a back list of all theses researched in Irish universities was first mooted by Richard Haworth in the 1970's (A.Y.I.A. 1977). Unfortunately that list was never published. We hope that with the publication of the U.C.D. list, in this article, a new start will have been made. If anyone in University College Cork, University College Galway, Queens University, Belfast or Trinity College, Dublin should want to undertake a similar cataloguing of theses held in those universities the editors of *Trowel* would be quite happy to publish it in future volumes, so long as the same format is adhered to.

The only other lists of theses on Irish archaeological topics were published by the Association of Young Irish Archaeologists in 1976, 1977 and 1983. Their aims were different, being more a guide to current research than a historical source. Not only did they include the title of the thesis and its author, but also an abstract of its contents. It is a great pity that their publication was only intermittent and has ceased since 1983. It would be a most useful project to reinitiate, both in terms of information exchange between researchers and also in historical terms. In that such lists might elucidate trends in and influences on archaeological research in Ireland.

THESIS LIST

In the lists above we have used the author and title of each thesis as cited on the title page of each thesis. So far as we know these are correct and as the authors wanted them, we cannot be held responsible for any mistakes or omissions.

Most of the M.A. theses researched in U.C.D. are classed as minor theses, this means that they are held in the Department of Archaeology. Anyone who wishes to consult a particular

thesis may do so as long as they receive permission from it's author and the Head of the Department. An author can withhold permission for up to three years after the date of submission. University College Dublin regulations state that permission must be sought from the Registrar to consult a Doctoral theses, though, strictly speaking, this only applies to theses in the U.C.D. library, not in the Archaeology Department.

Acknowledgements:

The editors wish to thank the Archaeology Department for permission to consult the theses in their possession. Professor Michael Herity and Dr Gabriel Cooney were most helpful in reading draft copies of the lists.