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Contents:

Abstract

Introduction

Ireland

Wales

England

Scotland

The Beneficial Effects of Music

Pythagorean and other ancient reference

The Instruments

Commentary and Criticism, 1800 to 2018

Conclusions of present study (2024)

Bibliography

Appendices: Glossary

Plates

1: Folio 36r, MS 700, National Library of Ireland, *Topographia Hybernica,* Irish harp design contemporary with the manuscript.

2: Side panel of the reliquary shrine of St. Máedóc (Mogue) of Ferns, County Wexford.

3: Folio 3v, MS G 25 [circa 1225] , The Morgan Library and Museum, New York, detailed English source illustrating hand positioning and string array.

4: Harpist in south porch (right side upper corner) of Saint David's Cathedral , Pembrokeshire, West Wales (author's sketch 2024).

5: The Seven Liberal Arts: Copy of 'Philosophy and the Liberal Arts', plate 11 from the *The Hortus Deliciarum* created by Herrad of Landsberg (and the community of women, Vosges mountains, 12th century).

6: Personification of Music (Musica) as a branch of the Liberal Arts (in the Quadrivium).

7: Crwth as illustrated in MS 'Hafod' 24 , p. 358, National Library of Wales, Aberystwyth.

8: Crwth as illustrated by Edward Jones, *Musical and Poetical Relicks of the Welsh Bards,* 1794, p.89.

9+10: Bagpipe designs illustrated in the 'Hafod MS 24' , p, 358, National Library of Wales, Aberystwyth.

11: Single pipe design with attachments at both ends for mouth and end-piece utilising horn: Edward Jones' *Musical and Poetical Relicks of the Welsh bards,* 1784, p89.

12 : Welsh musical terminology in the Black Book of Chirk, p.104.

Abstract

The project attempts to generate original research, as no apparent previous in depth study has been attempted on this scale. Smaller scale entries have been made in dictionaries, journals and biographical volumes. These have tended to be insufficient to provide a comprehensive account of the subject-matter, as extracted from the collected works, to possibly collate a better overall summary of the subject.

The current project is therefore focused on, and concerned with: a review of the content of what Gerald comments on in regard to music making skills and related matters among the four nations, and on a wider philosophical horizon, in consideration of importance in the field of musicology, social history, etc., and whether any real substance can be attached to his writing in this study area; to offer a personal contemporary analysis and critique of what Gerald maintains and what previous authors may have written in respect of this; to possibly corroborate or challenge, if indeed any previous detailed textual materials have been produced; to ascertain whether any new perspectives can be achieved in the light of increased access to iconography and other contemporary materials, e.g. British Museum digitised manuscript resources. Such material might be absent from previous commentary, on further examination.

Introduction

Although there is no definite evidence that Gerald received any substantial training in practical music performance or theory, any major deviation of objectivity does not seem to enter into Gerald's commentary on musical arts. Crucially, one particular reason for this is that music in the mediaeval system of education (i.e. the 'Seven Liberal Arts') had been included in the 'Quadrivium', essentially a group of sciences based upon measurement, and inclusive of arithmetic, geometry and astronomy. This 'matter of fact' approach, and bearing in mind, also, his superior education in Paris, where knowledge of developments in musical artistry might be expected, suggests that Gerald seems to have a firm understanding of these elements in music and attempts to apply them to societies outside the Parisian sphere of influence. [1]

One of these societies was mediaeval Ireland. Gerald was tasked with acting as an attendant to the future King John during the ill-fated tour of 1185,[2] and the result of this experience seemingly galvanised Gerald into the authorship of the *Topographia Hibernica*. It is within this work that Gerald begins commenting on music specific to that country, and which is later expanded upon with a view to studying other areas of the four nations of the British Isles and of the art in a general, as a universal perspective, possibly to display the assumed depth of the author's knowledge and therefore status in writing and lecturing on the subject.

Major textual sources

Passages discussing music practice and instruments from the *Topographia Hibernica* ('Topography of Ireland', 1187) *Descriptio Kambriae* ('Description of Wales', 1194) are reviewed along with original research on contemporary instruments in use, any differences between the nations, and referral to any additional manuscript sources in respect of illustrations and even artefacts extant from the period, e.g.,

[1] Paris and Notre Dame are associated with early European developments in the field of non single melodic styles, i.e., 'polyphony' as opposed to 'monophony.' These developments were possible under the patronage of the Cathedral of Notre Dame during the 12th and 13th centuries.

[2] At this stage John was designated 'Lord of Ireland.'

carvings from West Wales locations and objects of Irish origin, dating from the earlier medieval centuries (circa 11th to 13th). Gerald's original texts are reorganized into a separate 'national' format reflecting the experience of the four nations: Ireland, 'Wallia' (Wales), Scotland, and England (what Gerald refers to as 'Britannia', excluding Wales). [3]

Ireland

Gerald's observations on Irish musicianship appear in Part Three of *Topographia* towards the close of Chapter 11 where he describes the various technicalities associated with plucked stringed instruments, most probably the Irish harp contemporary with the time (see Plates 1 and 2).[4] In the University of Wales translation of 1982, Brinley Roberts summarises this as follows:

> They glide so subtly from one mode to another, and the grace notes so freely sport with such abandon and bewitching charm around the steady drone of the heavier sound, that the perfection of their art seems to lie in their concealing it, if it were the better for being hidden. An art revealed brings shame. Hence it happens that the very things that afford unspeakable delight to the minds of those who have a fine perception and can penetrate carefully to the secrets of the art, bore, rather than delight, those who have no such perception – who look without seeing, and hear without being able to understand. [5]

Analysing this description, a number of facts seem to emerge. Apart from the technicalities commented on below, what Gerald seems to be emphasizing is his own understanding as a facet of his breadth of knowledge and polymath character. So scholars like Gerald most certainly accumulate a 'fine perception and penetrate carefully to the secrets of the art.' Indeed, the concealing of it is uncovered by him with the description of some of the technical devices employed by the Irish musicians. To Gerald's mind therefore, an author such as he most certainly retains the authority to write on such matters.

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[3] National Library of Ireland MS 700 *Expugnatio Hibernica* (12th century): Gerald's map of the nations, Britannia, Wallia, Hybernia, Scotia, Yslandia, Flandria, Francia, etc.

[4] Gerald's observations on musical instruments are largely devoid of imagery but MS 700, National Library of Ireland. *Topographia Hybernica*, Folio 36r, does have a miniature in the margin reproduced in the Plates (along with others representing a survey of the genre).

[5] Brynley Roberts, *Gerald of Wales* (Cardiff: University of Wales Press, 1982} p,67.



Plate 1: Folio 36r, MS 700, National Library of Ireland, *Topographia Hybernica,* Irish harp design contemporary with the manuscript [the performer is seen tuning the instrument].

Plate 2: Side panel of the reliquary shrine of St. Máedóc, Irish manufacture of the later 11th century. Pins for string attachment on lower frame number approximately 20. Actual number is difficult to ascertain but this figure would provide a gamut of two octaves and more (as in the case of Plate 3).



Although Brinley Roberts' account is informative, it is limited when compared with the edition by Thomas Forester (2000). This has the following account under the heading in the *Topographia,* Chapter 71, 'Of the incomparable skill of the Irish in playing upon musical instruments' :

The only thing which I find that these people apply to a commendable industry is playing upon musical instruments, in which they are incomparably more skilful than any nation I have ever seen. For their modulation on these instruments, unlike that of the Britons to which I am accustomed, is not slow and harsh, but lively and rapid, while the harmony is both sweet and gay. It is astonishing that in so complex and rapid movement of the fingers, the musical proportions can be preserved, and throughout the difficult modulations on their various instruments, the harmony is completed with such a sweet velocity, so unequal an equality, so discordant a concord, as if the chords sounded together fourth or fifths [*diatessaron, diapente*] . [6]

Combination of sounds by playing more than one string at the same moment is indicated explicitly:

They enter into a movement, and conclude it in so delicate a manner, and play the little notes so sportively under the blunter sounds of the base strings, enlivening with wanton levity, or communicating a deeper internal sensation of pleasure, so that the perfection of their art appears in the concealment of it. [7]

Aspects of this translation might be better expressed. When discussing the effects of the higher-sounding harp strings against a lower-sounding accompaniment, 'the blunter sounds', the opposite must be implied. In fact the sonic effect, the 'little notes' [sounded on the shorter, highest sounding strings] will have the effect of sounding **above** the blunter sounds of what is now referred to as the 'bass' range of strings [that is, the thicker, longer material normally accompanying the melodic progression above them]. Alternatively, if the translator had said, 'under which the blunter sounds of the base strings are heard', then this would be better understood. Plate 3 gives a simplified visual portrayal of the sort of positioning of strings and hands to this effect.

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[6] Thomas Forester, ed. Wright, T., *The Topography of Ireland* [Giraldus Cambrensis] (Cambridge, Ontario: In Parentheses Publications, Medieval Latin Series, 2000), p.71.

[7] Ibid



Plate 3: Folio 3v, MS G 25 [circa 1225] , The Morgan Library and Museum, New York; detailed English source illustrating hand positioning and string array.

Analysis of what Gerald is striving to convey can possibly include the following:-
The ‘modulations’, the successive notes of a melody, are quick when compared for example with his experience with English players.

The ‘complex and rapid movement’ over [not under] in terms of pitch, suggests a non-parallel succession of quicker combination of higher pitched notes (perhaps ‘ornamented’ version of the melody) above the slower moving progression of the bass strings, and in doing so manages to maintain the measure of both melodic strands (melody and bass counterpoint) in proper time (*a tempo*).

The seemingly paradoxical description ‘unequal an equality’ can be simply resolved: that is, the number of basic ‘beats in a bar’, the ‘measure’ is not necessarily altered or extended, but rather that the skill of the Irish stringed instrumentalist is so accomplished as to fit everything contained in the melodic progression within the allotted time. Therefore, what might not work so well with players of other nations (e.g. England) is, with the skill of the Irish harper, done resulting with ‘harmony completed with such a sweet velocity.’ In this way the fundamental harmony of the ‘fourth’ [perfect fourth] and ‘fifth’ [perfect fifth] is maintained, but with the digression of discords and ornaments away from the fundamental harmony, e.g.:
concord-discord(s)-concord;
discord(s)-concord;
concord-discord-concord-discord-concord

The major tenet to emerge from this detail is that the artistry of these harpers is concerned with the ability to produce a fairly complex melodic style in contrast to a less adventurous approach by other practitioners.

Following Gerald’s technical description, he follows it with a national comparison in musical ability :

It must be remarked, however, that both Scotland and Wales strive to rival Ireland in the art of music; the former from its community of race, the latter from its contiguity and facility of communication. Ireland only uses and delights in two instruments, the harp and tabor. Scotland has three, the harp, the

tabor and the crowth or crowd; and Wales, the harp, the pipes, and the crowd. The Irish also used strings of brass instead of leather. Scotland at the present day, in the opinion of many persons, is not only equal to Ireland, her teacher in musical skill, but excels her; so that they now look to that country as the fountain head of this science.' [8]

As will be explained later under chapter 'The Instruments', Thomas Forester's translation of Gerald's *tympano* as 'tabor' (a kind of drum) is questionable in the light of later commentaries on Irish music of this period, and alternative interpretations have been advanced for this term.

Wales

Although Gerald's *Itinerary through Wales* (Itinerarium Kambriae) of 1191 was as much an opportunity for its author to elaborate on an otherwise step-by-step record of Archbishop Baldwin's campaign to recruit for the Crusade, with numerous accretions of the miraculous, anecdotal, natural history, historical and topographical lore, it is to the *Description of Wales* (Descriptio Kambriae) of 1194 that we must turn for what passes as relevant facts concerning Gerald's views on music towards the close of the twelfth century in Wales. This had followed closely after the completion of his first two works, the *Topography* and *Conquest of Ireland* (1185 - 1187). Of this, the Topography seems to have been the stimulus for the Description. Indeed the greater plan was to have proceeded with an extension of the project to include England and possibly Scotland in addition to the Welsh perspective.[9] Having said this, when Gerald comments on vocal (non-instrumental} styles, England is not entirely excluded. But the limited references could hardly be regarded as a comprehensive survey of the situation at that time when compared with the attempt in relation to Ireland. In this respect the overall planned discourse of the four nations is incomplete.

It could be said that *Descriptio Kambriae* became a counterfoil to the *Topographia*, fulfilling as it does, an attempt to display the good and not-so-good of Gerald's homeland and its people as he perceived it. It might also be added that to compose two major Irish-based works and none concerned with Wales would have in all

[8] Forester, ed. Wright, p.71.

[9] Sir Richard Colt Hoare, trans., *Giraldus Cambrensis*, T*he Itinerary through Wales*, the *Description of Wales* (London: J. M. Dent, 1908) p 149: Second Preface to Book 1 of the *Descriptio.*

probability been regarded as an obvious omission from what was to become a growing list of titles from Gerald's output. In fact Gerald has much to say about his fellow countrymen, their habits, sometimes complimentary, and, characteristically, the tendency to the opposite. He obviously regarded the work as groundbreaking:
'to rescue from obscurity those actions which have been hitherto imperfectably described . . . to bring into repute by my method of treating it a subject till now regarded as contemptible.[10]

Although Gerald regarded the Description as a major work, a reliable historiography really begins some four centuries on with a revival by the antiquarian Dr. David Powell, who published his version of both the Itinerary and Description in 1585.[11] By the beginning of the 19th century, sufficient work had been done so that the achievements of Sir Richard Colt-Hoare could effectively offer the Welsh-based writings in a complete translation.

With regard to the extent and interest in instrumental performance, according to Gerald in Book 1, Chapter 10 of the Description, he regards the practice as widespread. Guests who arrive early in the day have the following to look forward to:

Those who arrive in the morning are entertained till evening with the conversation of young women and the music of the harp; for each house has its young women and harps allotted to this purpose. Two circumstances here deserve notice; that as no nation labours more under the vice of jealousy than the Irish, so none is more free from it than the Welsh; and in each family the art of playing on the harp is held preferable to any other learning. [12]

Under Chapter 12, 'Of Their Quickness and Sharpness of Understanding', he summarises the methods of performance:

Their musical instruments charm and delight the ear with their sweetness, are borne along by such celerity and delicacy of modulation, producing such a consonance from the rapidity of seemingly discordant touches, that I shall briefly repeat what is set forth in our Irish Topography on the subject of the musical instruments of the three nations. It is astonishing that in so complex and rapid movement of the fingers, the musical proportions can be preserved, and throughout the difficult modulations on

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[10] Colt-Hoare, p.146, first Preface to *Descriptio.*
[11] Henry Owen, *Gerald the Welshman (* London: David Nutt, 1904*),* a major biographer of Gerald, lays out a comprehensive account of the work, its editors and sources throughout the intervening centuries to his own study, p.34.
[12] Colt-Hoare, *Descriptio* Book 1, Chapter 10, p.169.

their various instruments, the harmony is completed with such a sweet velocity, so unequal an equality, so discordant a concord, as if the chords sounded together fourth or fifths [13]

By the thirteenth century, bearing in mind the frequent iconographic sources, the principal instrument in use across an increasingly Norman influenced society was the harp, in its various triangulated forms. A contemporary design is illustrated in Plate 4, copied from the interior of the south porch at Saint David's Cathedral near Haverfordwest, West Wales, an area targeted by the followers and their offspring of Duke William of Normandy's campaigns beginning in 1066. This role, as predominant instrument of the island of Britain, formerly allotted to the lyre group of instruments, had seen the emphasis changed by virtue of the fact that the lyre had taken the modified form of ceasing to be a plucked string acoustical source to that of a 'bowed' form, where the string became subject to a constant source of vibration by the application of bow drawn across the string, back and fore, causing a continuous source of friction, and hence a continuous sound. This explains how the once plucked form of the Welsh 'crwth' or its ancestors, changed its character into the eventual design seen for example in Plate 7, from the so-called 'Hafod' MS illustrations (note the short bow indicated alongside the crwth).[14] With the addition of a 'fingerboard' on the crwth, a constructional improvement became available for the lyre's form, resulting in the possibility for creation of additional musical pitches without the need for attempting to attach additional strings to a small frame. In contrast, the harp's form was later expanded and strengthened to provide for a more extensive sonic range, with additional strings arranged. Gerald's reference to the 'little notes' in contrast to the 'base strings' reflects this system which was current by the 12th century, and certainly the example at Saint David's would be capable of producing a basic 'counterpoint' or fundamental harmony in support of a melody, perhaps a local Welsh melody drawn from the locality in West Wales. Similarly, the Irish instruments would be utilised in the same manner to produce a similar effect, but with the possibility of a more cloying metallic sound by means of brass alloy stringing.

[13] Ibid. p.172
[14] National Library of Wales, Aberystwyth, MS 'Hafod' 24 , p. 358.

Plate 4 Harpist in south porch (right side upper corner) of Saint David's Cathedral, Pembrokeshire



Following Gerald's Chapter 12 of the Description, which is solely concerned with instrumental practice and poetic techniques, Chapter 13 is based upon 'Symphonies and Songs' , meaning of course styles of vocal music and technique (actually 'sung'

in the meaning in use today) as opposed to 'rhymed songs and set speeches' (i.e. not necessarily including musical accompaniment in a conventional interpretation). [15]

Here, Gerald offers information which seems to result from direct experience, possibly gained when accompanying Archbishop Baldwin on his itinerary:

> In their musical concerts they [the Welsh] do not sing in unison like the inhabitants of other countries, but in many different parts; so that in a company of singers, which one very frequently meets with in Wales, you will hear as many different parts and voices as there are performers, who all at length unite, with organic melody, in one consonance.[16]

Richard Colt-Hoare's translation at this stage seems remarkably accurate and hardly needs any comment or further analysis other than in consideration of the effects of Welsh congregational vocal style spanning the 19th century to even today where the group effort results in an effect of a kind of euphonious harmony typical of the Welsh male-voice choir, chapel hymnal and similar grouping. In fact, what Gerald is describing in his down-to-earth manner is the musical technique of either 'homophony', or at the very least, 'heterophony', a more complex effect musically than a single-voiced melody, or more than one voice singing exactly the same melody in unison.

England

As far as English experience is relevant, Gerald's comments on instrumental ability are limited to that cited earlier when discussing Irish practice. This is to say that compared with Irish 'modulation', 'that of the Britons [is] slow and harsh.' Analysis of this comment might take the course of describing a less ornamental approach to presenting a melody, a plainer effect, perhaps influenced by the instrument and a method of stringing or the materials used for that purpose. This makes sound sense when comparing the sonic effect of gut or leather against brass. The message to appreciate here is a tacit understanding that strings composed of different materials whether organic or manufactured will give different tone quality and resonance.

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[15] Colt-Hoare ,*Descriptio,* pp 173 - 174.
[16] ibid. p. 175.

One possible anomaly requires an explanation when discussing comparative methodology of the musicians of the four nations in that when Gerald refers to 'Britannia', he is excluding Wales as mentioned above (Major textual sources). Furthermore, he can be geographically more explicit when necessary, more so than when discussing Wales, with reference to various districts. Although he does not discuss English instrumental music to any significant extent, he does offer information on vocal styles in Chapter 13 of the *Descriptio*:

> In the northern district of Britain, beyond the Humber, and on the borders of Yorkshire, the inhabitants make use of the same kind of symphonious harmony [as the Welsh], but with less variety; singing only in two parts, one murmuring in the base [bass] , the other warbling in the acute or treble. Neither of the two nations has acquired this peculiarity by art, but by long habit, which has rendered it natural and familiar; and the practice is now so firmly rooted in them, that it is unusual to hear a simple and single melody well sung; and what is still more wonderful, the children, even from their infancy, sing in the same manner. As the English in general do not adopt this mode of singing, but only those of the northern countries, I believe that is was from the Danes and Norwegians, by whom these parts of the island were more frequently invaded, and held longer under their dominion, that the natives contracted their mode of singing as well as speaking. [17]

The message here is that a single [monophonic] strand of melody is now less characteristic of these regions as much as polyphonic music (in its broadest sense, composed of more than one concurrent melody at different pitch). His comments with regard to the ability of children to participate in the method is certainly credible, being exposed to it from birth, as a multi-voiced phenomenon, and by encouragement being trained in the process.

Scotland

In the concluding remarks of Chapter 16 of the Irish Topography, Gerald indicates his intention to provide a separate projected equivalent for Scotland. Nevertheless, this interest is not completely overlooked in the existing works, as briefly mentioned earlier in terms of instrumental ability. Although apparently obtaining the opinion from third parties, to reiterate what Gerald states, 'Scotland at the present day, in the

[17] Colt-Hoare, *Descriptio*, pp. 174 - 175.

opinion of many persons, is not only equal to Ireland, her teacher in musical skill, but excels her; so that they now look to that country as the fountain, head of this science. Ireland only uses and delights in two instruments, the harp and tabor. Scotland has three, the harp, the tabor and the crowth or crowd' [18]

It is with reference to these instruments that he gives us a general overview of the position across the four nations as far as we are able to interpret what he tells us, not exactly immediately obvious due to avoidance of English or Welsh terminology. An appraisal of what previous scholarship has made of this is given below together with further commentary as part of this reappraisal (see chapter 'The Instruments).

The Beneficial Effects of Music

Immediately following Gerald's discourse upon the Irish musical practices, the latter seems to be used as an embarkation point for a scholarly tract involving universal tenets and theory. This can possibly reflect his later studies abroad. Extensive study in Paris had followed his initial studies at the Benedictine abbey at Saint Peter's, Gloucester. This broadened educational impetus seems likely to have played some part in the body of knowledge acquired and so obviously displayed by Gerald in the chapter following the Irish musical technical descriptions. Although Gerald describes it as 'a delightful digression',[19] the opportunity for what could be regarded as a miniature tour de force of philosophical discourse becomes apparent with the range of references and sources elaborated on. Indeed, Gerald does not restrict himself to chapter 12, *On the Beneficial effects of Music*, but he adds further extensions under numbers 13, 14 and 15, discussed briefly below. [20]

Although the description of Ireland's instrumentalists could be regarded as complete in a compact form, it seems that Gerald could not just leave the matter in that way, feeling the need to enlarge on the whole subject, justifying possibly his comments, and giving vent, so characteristically, to his font of knowledge, as if it was his duty to inform his public (the texts seem almost to be intended as material for public

[18] Forester, ed. Wright, T., p. 71
[19] Forester, ed. Wright, T., p 73
[20] Forester, ed. Wright, T., pp 73 - 74

narration somewhat like Charles Dickens' renditions as a public celebrity in the Victorian period). In any case, sometime later than Topographia's initial composition and the later expanded version containing the 'Beneficial Effects', Gerald had scoured sources relevant to his extension, bearing in mind his underlying principle of the ability 'to converse of science with those who are skilled in it.' [21] These sources include the philosophical works of Isidore of Sevilla, Aurelius Cassiodorus and the Old Testament.

Essentially Gerald begins with an emphatic statement that music 'checks moroseness', uplifts the spirit and benefits the mental state, theoretically reversing a state of pessimism to optimism. And so what is being advanced is the theory that music can act as a catalyst on the mental state: it 'draws forth the genius. . . quickens the senses.' [22] However, Gerald characteristically does not overlook the opposing aspect that it can have a soporific effect or, with reference to 'Venus', hedonism:

> The sweet harmony of music not only affords us pleasures, but renders us important services. It greatly cheers the drooping spirit, clears the face from clouds, smooths the wrinkled brow, checks moroseness, promotes hilarity; of all the most pleasant things in the world, nothing more delights and enlivens the human heart. There are two things which, more than any other, refresh and delight the mind, namely, sweet odours and music. Man, as it were, feeds upon sweet odours and sweet music. In whatever pursuit the mind is engaged, it draws forth the genius, and by means of insensible things quickens the senses with sensible effect. Hence in bold men it excites courage, and in the religious it nourishes and promotes good feeling. Hence it happened that bishops and abbots and holy men in Ireland were in the habit of carrying their harps with them in their peregrinations, and found pious delight in playing upon them. In consequence of this, St. Kevin's harp was held in great reverence by the natives, and to this day is considered a valuable relic, possessed of great virtues. Further, the war-trumpet, with its blast, shows the corresponding effect of music, inasmuch as when its loud alarm gives the signal for battle, its echo raises the spirit of the brave to the highest pitch. Sometimes music has the contrary effect, for its influence may be used to heighten the pleasures of the vicious, as well as to animate the virtuous and brave. It is written of Alexander of Macedon, that when on some occasion he heard the sweet tones of a harp, while at table with his friends, he had the strings broken. Upon being asked why he had done this, he replied, 'It is better that chords should be broken than hearts [corda].' For he was sensible, from his knowledge of human weakness, that his mind was highly excited, however he might struggle against it, by what he pointed out to them; and that such soft strains inclined him rather to pleasure (to which, perhaps, he was already disposed) than to war; to indulgence than to hardship; to Venus than to virtue; to voluptuousness, rather than to voluntary sacrifices of his ease. For our passions are by no means in our own power. [23]

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[21] Forester, ed. Wright, T., p.72.
[22] ibid.
[23] ibid.

One obviously important view held in this discourse centres upon the notion that music has a physically healing power, or at least the effect of ameliorating suffering:

Moreover, music soothes disease and pain; the sounds which strike the ear operating within, and either healing our maladies, or enabling us to bear them with greater patience. It is a comfort to all, and an effectual remedy to many; for there are no sufferings which it will not mitigate, and there are some which it cures. David's lyre restrained the unclean spirit from vexing Saul, and while he played his trouble ceased; but as soon as the strains ceased, he was vexed again. [24]

However, Gerald can adopt an opposing argument by reference to Soloman's condemnation: 'the man who can amuse himself with singing when he is in trouble, and affect to be gay and lift his voice in jocund strains at the moment he is suffering from severe pain, must be either a stoic or a fool.' [25]

Fundamentally, Gerald appears to arrive at a synthetic compromise:

It appears, then, that music acts in contrary ways; when employed to give intensity to the feelings, it inflames, when to abate them, it lulls. Hence the Irish and Spaniards, and some other nations, mix plaintive music with their funereal wailings, giving poignancy to their present grief, as well as, perhaps, tranquillizing the mind when the worst is past. Music also alleviates toil, and in labour of various kinds the fatigue is cheered by sounds uttered in measured time. Hence, artificers of all sorts relieve the weariness of their tasks by songs. The very beasts, not to speak of serpents, and birds, and porpoises, are attracted by musical harmony to listen to its melody; and what is still more remarkable, swarms of bees are recalled to their hives, and induced to settle, by musical sounds. I have sometimes observed, when on a voyage, shoals of porpoises long following in the wake of the ship when she pursuing her course, and how they leaped above the surface, and erected their ears to listen to the tones of the harp or the trumpet. [26]

The notion that any important argument or statement has to be counterbalanced in some way, or at least subjected to a differing view, expanding the discussion, is a trait which seems to occasionally permeate Gerald's method of writing style.

Philosophically, Gerald is well aware of his predecessors. The latter portion of his chapter is, in a way, something he would be unlikely to omit from any serious

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[24] ibid.
[25] ibid.
[26] Forester, ed. Wright, T., pp.72 - 73

discussion. Prominent is the 6th-7th century encyclopaedic writing of Isidore of Sevilla, in particular that relating to Musica Universalis and 'harmony': teaching cannot be perfect without harmony; there is nothing in which it is not found:

> The world itself is said to be harmoniously formed, and the very heavens revolve amidst the harmony of the spheres. Sounds, the materials of which melodies are composed, are threefold; first, they are harmonic, being produced by the voices of singers; secondly, they are organic, being produced by wind; thirdly, they are rythmical, produced by the touch of the fingers. For sounds are either produced by the voice, through the throat, or by wind, as a trumpet or pipe; or by the touch, as by the harp, or any other instrument the melody of which is produced by the finger.[27]

Stringed instruments are prominent in Gerald's outlook on the science. If an acclamation for a particular musical instrument was ever sought, then the following extract is unlikely to be bettered. He quotes at length from Aurelius Cassiodorus: [28]

> These are the benefits which the harp confers:—It changes grief and melancholy to mirth; assuages the effervescence of rage; charms away the most savage cruelty; effaces cowardice; rouses the languid and sleepy; and sheds a soothing repose on the wakeful. It recalls man from foul lusts to the love of chastity; and heals that weariness of the mind which is always adverse to good thoughts. It converts pernicious sloth into kindly succour; and, what is the most blessed sort of cure, expels the passions of the mind by its sweetest of pleasures. It soothes the spirit through the body, and by the mere sense of hearing moulds it to its will, making use of insensible things to exercise dominion over the senses. The divine mercy has scattered abroad its favours, and made all its works to be highly praised. David's lyre expelled the devil; the evil spirit obeyed its sound; and while the minstrel sang to the harp, thrice was the king released from the foul bondage to which he had been subjected by his spiritual enemy.[29]

The basis of Gerald's interpretation is the 5th - 6th century scholar's *De artibus ac disciplinis liberalium litterarum,* a fairly compact tract elucidating the context of the Seven Liberal Arts to each other, viz., Grammatica, Rhetorica, Dialectica, Arithmetica, Musica, Geometria, Astronomia, and the constitution of each in detail, together with an introductory Preface.

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[27] Forester ed. Wright, p.73.

[28] Caput Quintum, M. Aurelius Cassiodorus, *De Artibus Ac Disciplinis Liberalium Litterarum,* https://documentacatholicaomnia.eu

[29] Forester ed. Wright, p.73.

A further three short chapters follow the summary given here. These take the reader even further back in time to supposed origins of the science and 'art'. [30]

Pythagorean and other ancient reference

Gerald considered it relevant to the work, leaving no stone unturned it seems, when coming to terms with ancient aspects of the study, to include the section, 'Of the first inventors of the art of music', attempting to summarise his accrued knowledge of origins. Perhaps as might be imagined, Gerald has to fall back on Biblical sources in this attempt to explain the phenomenon of musical invention. Referring to the Old Testament his first point of relevance reverts to the Book of Genesis, Book 4, 21., 'We read in the Book of Genesis, that Tubal, a descendant of Cain, who lived before the flood, was the inventor of music; and he is called 'the father of all such as handle the harp and organ.' [31]

The translation of Gerald's version by Forester indicates 'harp and organ.' And so, if any criticism were to be levelled at such attempts by Gerald and his later interpreters to investigate origins of music and instruments, then it might be that it can be over-specific in terms of the definitive identity of such items. It would be misleading to the modern reader to imagine, for instance, that an ancient Israelite would be developing and performing on an organ as we understand the designation in recent centuries. Wind instruments, activated by forced vibrations by the mouth is a better interpretation, being one of the oldest recognisable methods of producing sound regarded as 'musical', i.e., consisting of sounds with definite sustained pitches (regular frequencies of soundwave). The organ as an instrument of, for example, the church ceremonial tradition, evolved from experimental designs in classical Greece and later for instance seen in Roman mosaicry (e.g. open-air gladiatorial arena).

Although Pythagoras is brought into the discussion by reference to strings under tension as a source of the science, an omission from Gerald's details is that he fails to be definite enough in this respect in that the 'science' is based upon the physical

[30] The Forester-Wright translation contains both terms: science when considering the method of measuring the relationships in musical sounds, but art in the chapter heading.
[31] Forester ed. Wright, p.73.: Chapter 13 'Of the first inventors of the art of music'.

phenomenon of a string or chord vibrating quicker according to the increased tensile stress placed upon it when subjected to increased tightening with the result that the pitch of the sound goes up; in other words, the tighter the chord, then the higher the pitch will be: 'In the teaching of the philosophers we are told that the rudiments of this science were introduced by Pythagoras, from the sounds given by the stroke of hammers, and by strings struck while they were stretched.' [32]

Gerald adds some references to mythology and King David to complete this summary :

> Linus of Thebes, Zetus, and Anxeos, were the first who were celebrated for their musical skill; after whom the science gradually made such progress, that it became as disgraceful to know nothing of music as not to have learned to read.'[33] King David was an eminent patron and improver of musical instruments, many of which he invented, as well as made additions to all. He was the inventor of the psaltery with ten strings, and of several [others] [34]

The Instruments

No review of Gerald's texts could ever be complete without some survey of the sound world contemporary with his daily experience. From what can be deduced from his writings, this was dominated by the instrument he refers to as 'cithara'. Referring again to the Seven Liberal Arts mentioned at the outset, a visual imagery and personification of these is included as Plates 5 and 6, where we see 'Musica' personified as a female harpist performing on this, among other personifications of the Liberal Arts, confirming Gerald's emphasis on the most prominent instrument in that genre at that time. Of course, this had not always been the case. In the earlier centuries of Britain, we do not see this type of instrument at all. In the Romano-British mosaicry we are looking at the rectangular forms of the lyre predominantly accompanying imagery of Orpheus. By the first century CE in the Roman empire, the lyre-types had been adopted into the musical experience of the higher social echelons, notably by the emperor Nero Germanicus in person, as, controversially, in support for Greek dramatic performances, sometimes referred to

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[32] Ibid.
[33] Forester ed. Wright: Chapter 13 'Of the first inventors of the art of music' p.73.
[34] Forester ed. Wright: Chapter 14 'Of an eminent patron and improver of musical instruments' pp 73 - 74.

as ‘pantomime’. Characteristically, the Greek ‘Kithara’ (a large lyre suitable for public performances) had been Latinised by replacing the ’K’ with ‘C’, and so Nero had become in his public dramatic persona, ‘Nero Citharoedus’, as seen in numismatic design from his imperium, but also alluded to by Suetonius, the Latin historian. [35]

With particular relevance to the post-Roman era, ‘Cithara’ had also found its way into Saint Jerome’s Vulgate when presenting the Old Testament description of music, for example in a banqueting scenario. The sixth century British priest Gildas then focused upon these passages when incorporating analogies of excess and debauchery associated with his ‘tyrants’ of Britain when proposing reasons for the declining fortunes of the island. In this way the term had entered insular Latin writing through Gildas’ *De Excidio et Conquestu Britanniae*.

As alluded to earlier, the Welsh ‘crwth’ along with similar instruments had become ‘bowed’ to a large extent and had lost its status as the predominant instrument of the plucked string group, as the harp had become adopted on a very wide scale across Europe, including Gerald’s national comparisons. So it could be conjectured that the promotion of the European harp of 12th - 13th centuries as the more preferred plucked sound in comparison to older lyre forms was a new norm, whereas in earlier centuries a type of plucked lyre with a rectangular frame would have been the more usual experience, if indeed the sole experience. However, among scholars such as Gerald, the established Latinised designation of ‘Cithara’ had remained in use to describe the plucked instrument *par excellence* of the earlier middle ages, before the ascendancy of the lute family of the Renaissance period (around the 15th century onward). And so when medieval writers refer to cithara, this could also include harp forms, but avoiding the Anglo-Germanic language origins of ‘harp’. In other words, cithara had lost its original significance and became a synonym for harp.

[35] Suetonius *De vita Caesarum*, ‘Nero,’ cap’s 20 -21. The coin designs seem remarkably accurate in that the emperor is depicted in typical citharoedus pose with head tilted back for ease of voice production whilst at the same time managing the bulky form of the Cithara.

Plate 5: ‘Musica’ playing a Cithara (otherwise harp). Written inverted above the instrument.



Plate 6: Diagrammatic relationships of the Seven Liberal Arts attractively portrayed in female personification.



'Crowth' or 'crowd', in translation, is listed by Gerald as an instrument common to Scotland and Wales.[36] Translation of the Latin text with terminology such as this is obviously dated in that the contemporary designation is now 'crwth' rather than any other form, at least in Welsh educational journals or academic literature. But in any case what we we are considering is later manifestation of similar Latin terminology as found for instance in the poetry of Venantius Fortunatus, the Venetian author and bishop, when in praise of a major patron, Duke Lupus, who is worthy of recitation or song with accompaniment by the Roman Lyre, Barbarian harp, and Breton chrotta.[37]
At the time of Venantius, these instruments were in all probability all versions of plucked lyre forms, as no definitive illustrations of traditional harp designs exist at this period. Lyre forms have been excavated in much decayed condition from pagan burial sites such as Sutton Hoo, Norfolk, and predate medieval plucked and bowed stringed forms with which Gerald had become familiar some six centuries later. Unfortunately, Gerald does not enter into any detail of construction or method of performance, if we are in fact discussing a bowed lyre. But considering subsequent musical history over the next five centuries, it is unlikely that any other instrument was being referred to, particularly by a process of elimination. Plates 7 and 8 illustrate the bowed lyre as illustrated from Welsh source material in later centuries to Gerald's account (he does not illustrate the form).

'Tympano' and "Tibia' ('Thibiis'), the other two instrumental terms interpreted from the manuscripts by Thomas Forester and Edward Jones, suggest (a) an instrument which is sounded by means of a membrane vibrated, and (b) a cylindrical item suitable for adapting into an aerophone (sounded by movement of air, as blown through a tube), respectively.

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[36] Forester ed. Wright, p.71.
[37] Judith George, ed., *Venantius fortunatus, Personal and Political Poems* (Liverpool University Press, 1995), book seven.

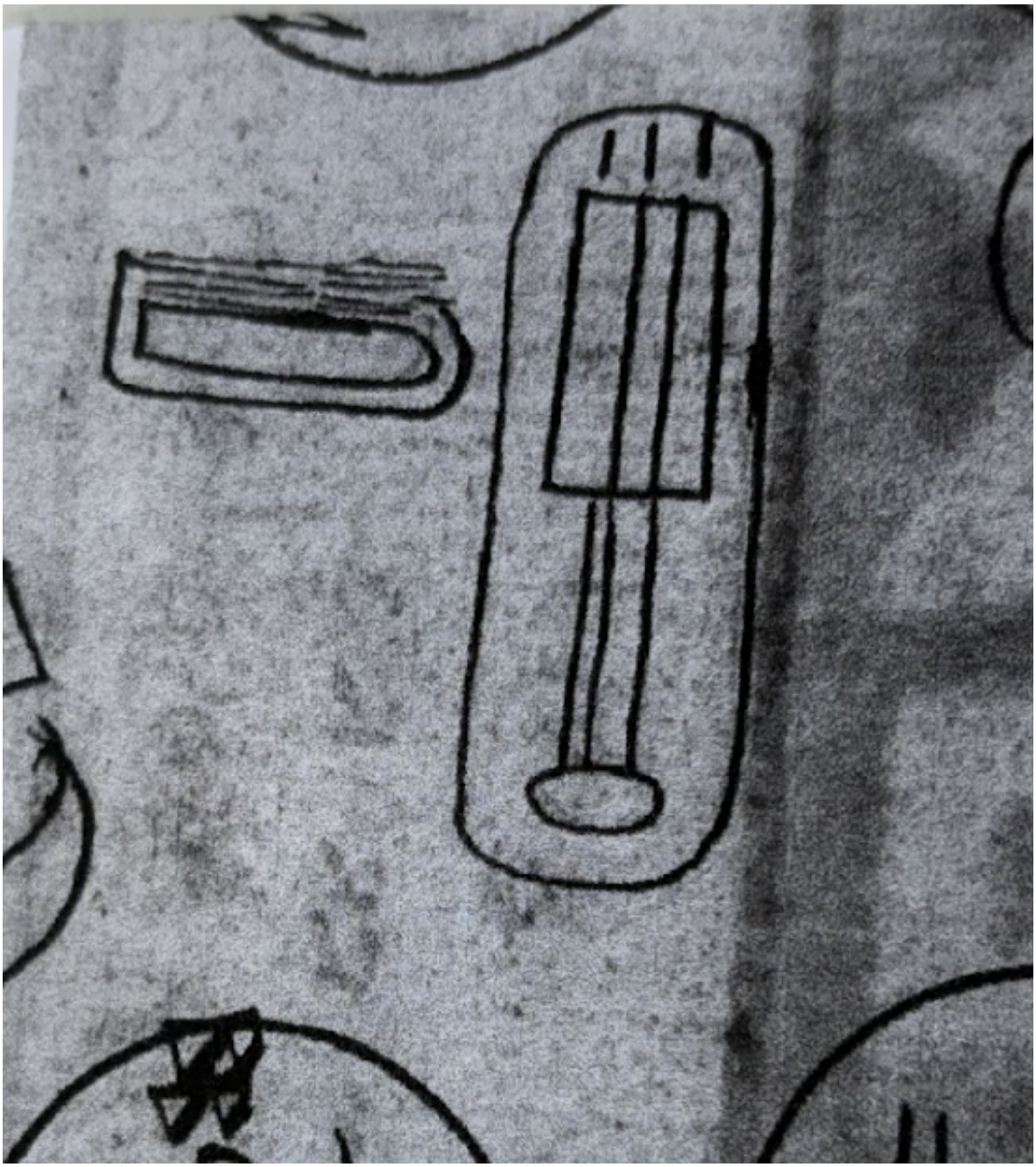
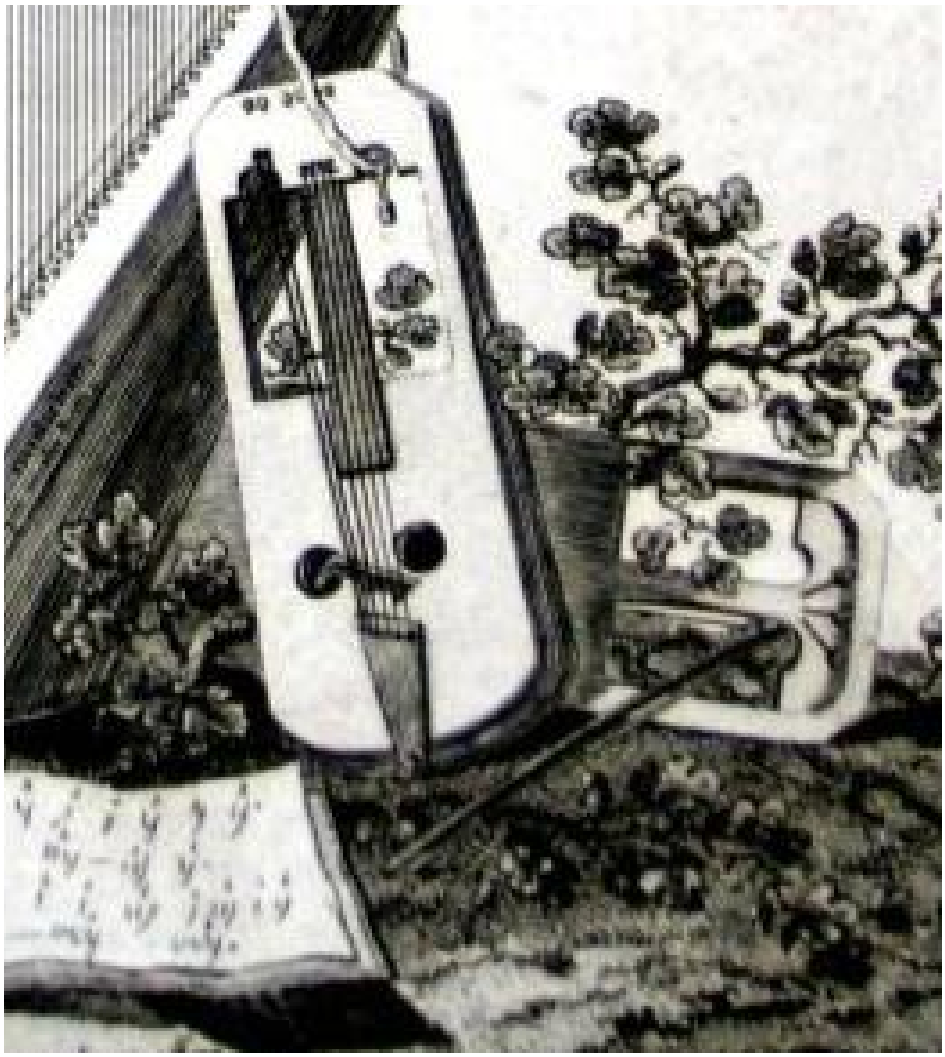


Plate 7: Sketch of Crwth with a bow to its left.

Plate 8: Edward Jones' detailed images of the bowed lyre in the 18th century



‘Tibia’, as a regularly recognisable noun for an instrument, illustrates how Gerald prefers to maintain a Latin script rather than use any available British/Welsh term. Being that he includes this in the Welsh group of national instruments, it is safe to assume a generic intention of just ‘wind blown’, and not the Roman equivalent of the classical Greek ‘aulos’, both eventually displaced by those illustrated by the MS Hafod 24 (see Plates 9 and 10) and by the publication of Edward Jones.[38] Such pipe designs involving attachments to bags (bagpipe) constitute membership of a kind of international sub-genera. The technology associated with this group is based upon maintaining a reservoir of compressed air in the bag, supplied by a tube from the player’s mouth, and at the opposite end, the actual pipe or pipes with measured holes for ‘fingering’ to give a basic melody, or melody with ‘drone’ accompaniment. A more direct method of producing sound is seen in the hornpipe design without bag (Plate 11). The expanded end of the pipe, made possible by the attachment of an inverted animal horn for example, creates some means of acoustical improvement as for example seen widely on various modern orchestral brass instruments, where the end of the metal tube flares out gometrically consistently at the same level of the circumference of the circle. But of course in the case of Gerald’s instrument he is associating it with Greco-Roman ‘woodwind’ types, as is frequently seen illustrated on Greek classical ceramic-ware, and in early, pre-medieval Roman art. ‘Woodwind’ of course is a generic term; the ancient tibia or aulos could incorporate both organic and smelted material in their construction. In any case, by the 12th century, these early instruments had largely gone out of fashion and the Edward Jones illustration of the pibcorn seems more representative of a native approach to producing the type of melody associated with this instrumental group.

[38] *Musical and Poetical Relicks of the Welsh bards*, 1794, pp 89-90.

Plate 9: Welsh bagpipe, later medieval period.

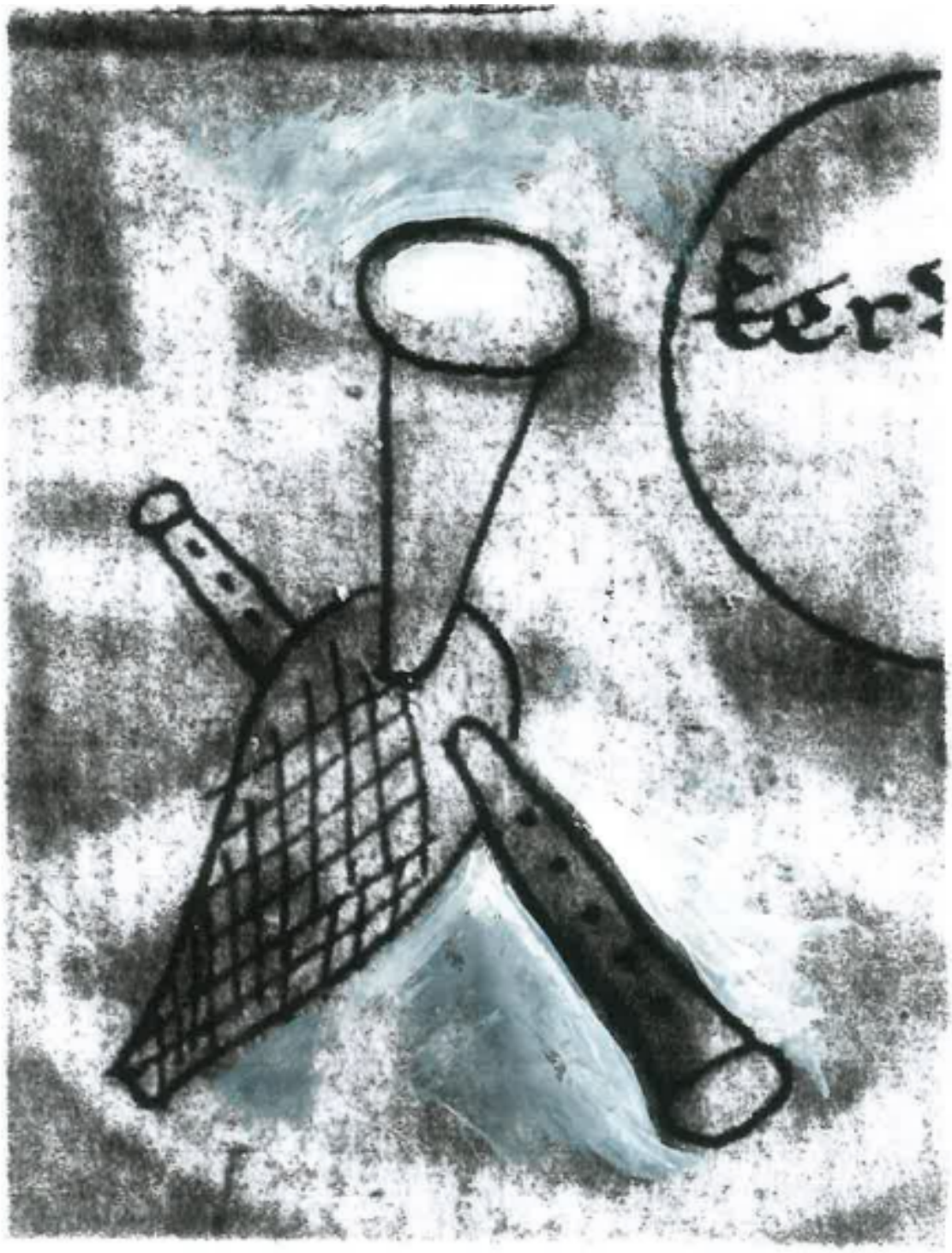


Plate 10: Welsh bagpipe, alternative design, later medieval.

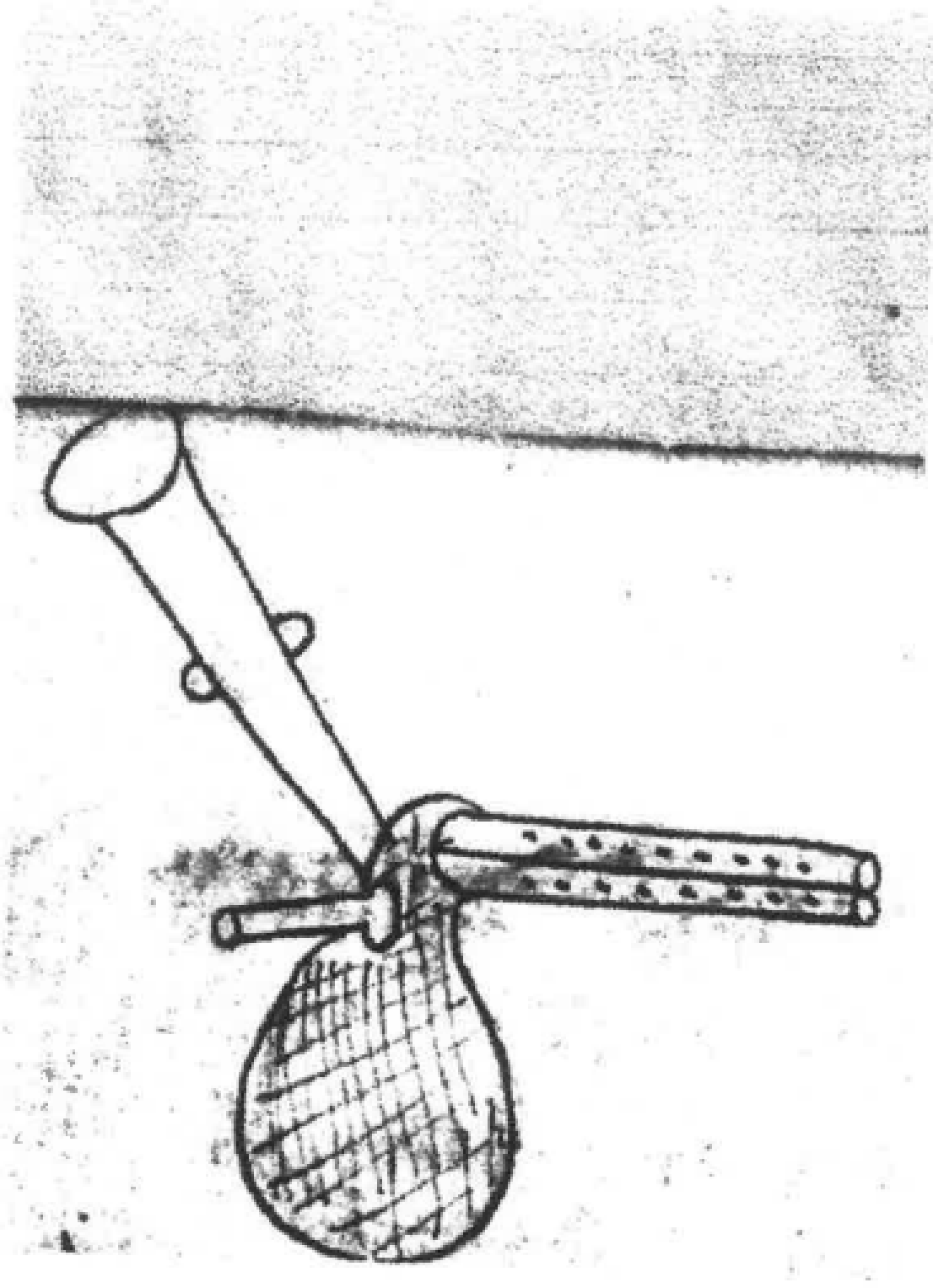
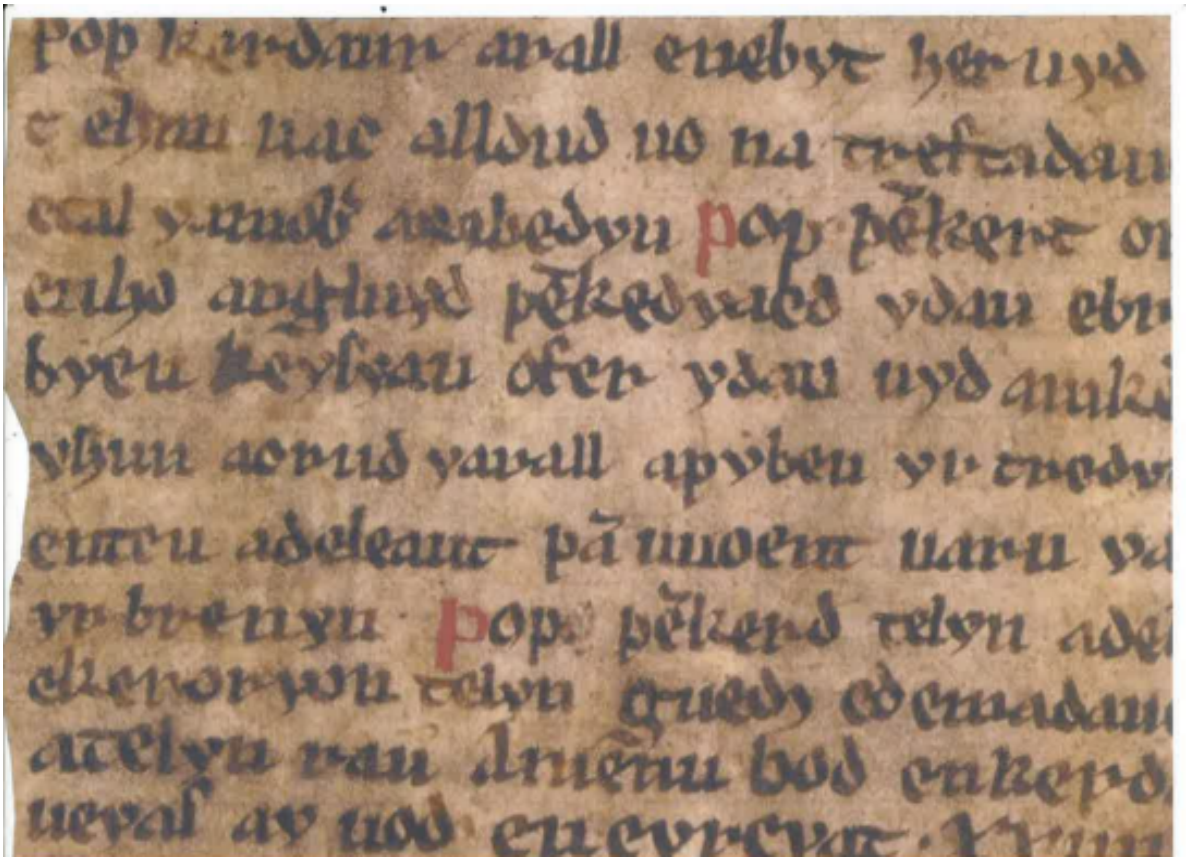


Plate 11: Welsh hornpipe, ‘pibcorn’. Direct air to tube method via mouthpiece.



Plate 12: Medieval Welsh musical instrumental terminology in the 'Black Book of Chirk', page 104: ***telyn, crud, pybeu*** (NB: crud and pybeu have a prefix of 'a')



'Timpano', the last of the four instruments mentioned by Gerald, is more of a challenge to attribute any definite form to as there could be more than one possibility; in fact a similar research problem to tibia, but possibly involving reference to different generic types as opposed to coming under a single generic group such as the aerophones, to which the woodwind group of the pipe(s) belong. Earlier writers on the subject seem to have widely divergent views. Jones (1794) associates the term with percussion instruments.[39] William Grattan Flood lists it as a 'viol', an early type of bowed stringed instrument.[40] A leading Irish source in contemporary Irish musicology, Ann Buckley, associates it with the Irish 'cruit' or 'crot', as a stringed instrument.[41] Further research might benefit from descriptive references in early manuscript poetry: for example, the 15th century source, 'Book of Lismore', (folio 126a1–140a2), contains the following description (note the reference to the strings of 'red gold', an alloy with a high cuprous element).

Cormac recited this poem in which he described the young man to his people:

1. There appeared to me on the mound of Tara
   a beautiful, colourful young man.
   Surpassing his beauty, handsome in appearance,
   his garments embroidered with gold.
2. In his hand he held a silver tympan,
   its strings of red gold:
   sweeter than any music under heaven
   the sound of those strings.
3. A bow of hide, making a hundred sounds of sweet melody,
   over it were two birds.
   And these birds were able to play the tympan
   (and not incompetently either).
4. He sat close to me in friendly fashion
   as he played the tympan to inebriate my spirit. [42]

[39] Edward Jones, *Musical and Poetical relicks of the Welsh bards,* 1794, p.95.
[40] William Grattan Flood, *A HIstory of Irish Music,* 4th edn. 1927, p.52.
[41] Ann Buckley, *Music in Ireland to 1500,* p.749.
[42] Seán Ó Duinn (trans.), The Siege of Knocklong/Forbhais Droma Damhghaire, p.15.

Here again there is reference to a 'bow', suggesting a method of performance similar to the crwth, but in contrast to the crwth, applied to metal strings.

Commentary and Criticism, 1800 to 2018

In terms of specific critique levelled at Gerald's medieval musical discourses, it is probable that this could be regarded as minimal, as outlined here. Following Richard Colt-Hoare's 19th century attempt at compiling the Welsh perspective, this undoubtedly drew increasing interest from scholars in the 20th. As a prominent example, Richter (1976) issues some doubt as to Gerald's credibility: [he] 'disliked Welsh music, especially when his nephew spent hours playing the Welsh harp instead of working.' [43] But in view of Gerald's laudatory comments in Chapter 12 of the *Descriptio,* describing perfection in technique, we cannot be led into a position of confusing any less competent amateur harping with the more professional performers. However, in Gerald's scholastic world, it is the detailed knowledge of the thing and the ability to lay it before the audience which has as much importance as any preference.

Owen (1904), possibly through lack of technical knowledge of musical practice, provides only a brief summary of Gerald's observations. Llewelyn Williams (1908) when introducing the Colt-Hoare 'Everyman' edition praises Gerald for impartiality. [44] Colt-Hoare himself does not offer any substantial commentary on musical practices unlike other aspects of the works. Brynley Roberts (1982) regards Gerald as a 'fieldworker', suggesting direct contact and observation with the subject-matter. However, being that Gerald's detailed comments on instrumental technique are specific to the plucked string, then actual first-hand aural experience of the other types can be doubted. Had Gerald researched the methods of bowed and aerophone instrumental practice in as much detail as he attempted to do with the harp, then the overall value of his description would have been greatly enhanced.

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[43] Michael Richter, *Giraldus Cambrensis: The Growth of the Welsh Nation* rev.ed., 1976, p.70, note 5.

[44] Loc. cit., Introduction, p.xiv.

In 1986, the Oxford University Press published by way of *The Musical Quarterly* the article by the author Shai Burstyn: *Is Gerald of Wales a Credible Musical Witness*? ostensibly evidencing for a positive or negative proof. Whilst being a valuable short summary of some of material contained here, some references are probably superfluous, as for example when Gerald is considered as the 'supreme egotist of medieval England',[45] whereas he might have considered himself a first-rank classically educated ambassador of 12th century Cambro-Norman society. As for the conclusions of Burstyn's work, his summary is that 'Gerald [is] a credible ear witness to the music he had heard in Northumberland and Wales. A seasoned traveller intimately familiar with ways of life in England, France and Italy, Gerald had a wide basis for sharply defining and evaluating divergent phenomena' [46] While these conclusions are largely borne out by a complete appraisal of a majority of the most important musical references throughout Gerald's collected authorship, what cannot be overlooked from Burstyn's list is, in fact, the major impetus for the material under discussion in its inception, i.e., Ireland. After all, it was his Irish experience that seemed to trigger the interest in the artistic practices in the musical world as Gerald saw it.

An even briefer appraisal of Gerald's observations is included in the 2001 *Grove's Dictionary of Music*, comprising a single column in total. This entry by Andrew Highes and Andrea Budgey includes musical theoretical terminology and its relevance together with interpretation of the comments made by Gerald in relation to communal or multi-voiced song. The authors generally ascribe the term 'heterophony' to these vocal styles: 'heterophony for a group or controlled improvisation on a known, or perhaps traditional, pattern of vertical sonorities.' [47]

As a contemporary addition to Brynley Roberts' eminent biography of 1982, the University of Wales came forward with a series of essays compiled into their 2018 publication *Gerald of Wales : New Perspectives on a Medieval Writer and Critic,* drawn

[45] Referring to the 'Swanee Review' issue xx, 1912, p.420, a relatively floridly-written source for a scholarly appraisal in the later 20th century.
[46] Shai Burstyn: 'Is Gerald of Wales a Credible Musical Witness?' *The Musical Quarterly,* Vol. 72, No. 2 (Oxford: University Press, 1986) p. 169.
[47] *The New Grove's Dictionary of Music and Musicians* (29 vol's), 2nd edition (London:Macmillan, 2001), Volume 9, p.898.

from a wide pool of academic specialists providing the results of research dedicated to the publication as a series of more up to date knowledge of the subject matter. Some pertinent reference is made to the manuscript illustrations (marginalia miniatures, as illustrated for example in Plate 1 above), thought to be the result of the effort of Gerald personally, or under his supervision at the time of the composition of the *Topographia*.[48]

Summary and Conclusions of present study (2024)

An attempt to express an objective opinion of the foregoing data completes the study. Taking these conclusions in the order of the sections above we can concede that although Gerald may have had the intention of giving as much attention to other nations as he does to Ireland and Wales in terms of musical tradition and ability to other nations, he fails to extend this at the same level of attention. However, we can possibly attribute to this the fact that what he does tell us might well have been sufficient in relation to England, particularly as he considers the harping ability of that nation inferior to Ireland. In other words, there is not much more that can be said in terms of technique.

Technique in musical performance derived from Getald's writings is very much centred on the plucked string. We do not get any indication of detailed accounts of other methods of producing musical sounds. From the aspect of a public narrative though, any further details beyond that relating to the harp, which had become a major focus for the art of music, at least from the perspective of the texts under review, might have seemed of secondary importance.

Importance of Pythagorean and other theoretical matter together with Gerald's understanding of Musica Universalis although appearing in the Irish context, on reflection, does not seem particularly out of place considering the apparent enthusiasm for the Irish resourcefulness with stringed instruments and their effect. Details relating to the harp in this section are a natural extension in the sense of

[48] Catherine Rooney, 'The Early Manuscripts of Gerald of Wales' in McMullen, A.J and Henley G, *Gerald of Wales : New Perspectives on a Medieval Writer and Critic* (Gwasg Prifysgol Cymru / University of Wales Press, 2018)

promoting the instrument as a possible musical epitome. This is to suggest that the study of the effects of musical sound on the psyche are ideally expressed and experienced through the medium of the plucked string as known in the 12th century. Effects of the phenomena of musical sound psychologically and physiologically, although described as a 'digression',[49] probably were considered as a major opportunity for Gerald to give to a public audience something of a condensed account of that body of knowledge acquired throughout his life. Something he could perhaps digress on with authority, or at least give that impression (he does not appear to have been a practising musician), in front of those not so well educated in the liberal arts.

Some corroboration for the instruments of music listed by Gerald can be noted in alternative manuscript sources. While Welsh musical terminology is absent from the Latin script, it is sometimes seen in medieval poetry and other texts in connection with references to the 'bard' or 'penkert' (head/senior musician). The 'Black Book of Chirk' , MS Peniarth 29, a slightly later 13th century manuscript source to Gerald, but relating to the Laws of King Hywel Dda in the 10th century, lists *pybeu, crud*, *telyn* (harp) as the instruments in use as part of the court etiquette or protocol.[50] The 'Book of Taliesin' *Llyfr Taliesin*, MS Peniarth 2 (circa 14th century) a substantial compilation of medieval poetry also lists these in a poem dedicated to memory of the Welsh hero Uthyr Pen:

Wyf bard ac wyf telynawr.
Wyf pibyd ac wyf crythawr.
Seith vgein kerdawr dygoruawr [51]

Unfortunately no illustrations of Welsh musicians can be located directly relating to Wales in the relevant texts. But utilising Welsh medieval poetry and other categories

[49] Forester ed. Wright, p.73
[50] MS page 104
[51] MS page 71, *Marwnat Uthyr Pen* : ' I am a bard, and I am a harper,
I am a piper, and I am a crowder. Of seven score musicians the very great enchanter.'

of script can be resourceful in a number of fields of inquiry. Taking just the above two excerpts as representing musical research on a very basic level, then it can be appreciated that outside the Latin linguistic milieu in which Gerald was immersed, an equivalent provincial Welsh description would most certainly be reflected by the terminology used: i.e. the pipe(s), *pybeu* would be played by a 'pibyd', the crwth, *crud* played by a 'crythawr', and the harp *telyn* played by the 'telynawr. Thus, as with the 'timpan' above, it is possible to construct a fairly reliable account of the musical practice in Wales and beyond in Gerald's time by reference to poetry, legal texts and iconography, to name but three material sources.

Fundamentally, the instrumentation focused on by Gerald and scribes such as those contributing to the Peniarth MSS falls into, and is representative of, three major types: the plucked string; the bowed string; the aerophone or 'wind instrument'. In the period under discussion the second and third categories may have had something of a character of a 'drone', a continuous counter tone sounding against the melody played above, in this way enhancing and adding harmonic interest to that melody. In the case of the pipes, scrutiny of the later medieval designs illustrated above seems to indicate the possibility of creating two different melodies, a primary and counterpoint perhaps, at the same moment, together with an additional drone pipe, theoretically giving the opportunity to create a fairly complex sonic effect. Ofcourse, as far as harmonic complexity goes, a harp of around twenty-plus strings, not reliant on a drone for additional sound, would have had the means of creating a more flexible approach to providing polyphonic effects. In fact, we could justifiably consider the Welsh version as providing the scope for an instrumental equivalent to Gerald's description of Welsh vocal style in the sense of the possibility of creating different melodies simultaneously, in harmony. Similarly, and in some contrast, the Irish style of performing as suggested by Gerald. . . 'complex and rapid movement of the fingers', seems to be echoed occasionally in a vocal folk tradition existing to the present day in Irish singing, which can be considerably ornamented with quick inessential additional notes to that of the melody, or what can be construed as such. With taught metallic stringing, responsive to touch by fingernail rather than flesh, for

example, such florid melodic style can transcribe quite well to the medieval Irish instrument.

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Appendices

Glossary

A tempo played 'in time' of a measured 'beat' of a succession of sounds of equal value (measured length of time such as a second).

aerophone musical instrument producing sound by means of vibrating column of air within an enclosed structure, usually tubular.

bow(ed) an adaptation of the hunting bow used as a means of friction on a taut string giving a constant uninterrupted musical pitch as opposed to a plucking motion where the string is set in vibration by pulling and letting go once, in a sideways manner.

chordophone musical instrument producing sound by string vibration (usually connected to a **resonator).**

counter melody / counterpoint fundamentally a second, possibly contrasting melody sounded at the same time against the primary melody or 'tune'.

diatessaron a distance in musical pitch between four consecutive tones.

diapente a distance in musical pitch between five consecutive tones **.**

drone a sustained musical pitch which does not change, against which a more interesting recognisable melody is contrasted, creating a fundamental harmonic experience, but with limitations.

fingerboard an ancient, universal device, consisting of a flat or convex strip of wood attached to the neck of a plucked or bowed instrument, running usually under an array of strings, parallel with them, changing the instrument from a single pitch per string to multi-pitch by means of pressure of finger or other means upon the string against the surface.

heterophony simultaneous rendering of melodic variation on the same tune.

homophony combination of at least two melodic non-heterophonic strands of melody interacting as a more complex musical experience in contrast to a single melodic line of tones.

ornamented referring to the altering of a melody by embellishment, e.g. adding notes above and/or below a melody-note, usually quicker or even rapid; not necessarily an integral part of it.

pitch a definite sustained sound composed of an unwavering frequency of vibration (in the presence of air) on an instrument (usually) designed for such a purpose.

resonator a hollow structure with a connection to a vibrating string or set of strings with the purpose of amplifying the resulting sound.