The Killyfaddy Four – Transition?

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ZUSAMMENFASSUNG

Seit die als „Killyfaddy four" bekannten hölzernen Rohrteile im 19. Jh. in Irland entdeckt wurden, haben sich um sie viele Fragen ergeben, die bislang nicht beantwortet werden konnten. Eine ausgiebige Untersuchung und C14-Datierung im Jahre 2002 löste weitere Ratlosigkeit aus. Aus diesem Grund wurde beschlossen, auf dem 4. Symposium der International Study Group on Music Archaeology *2004 detaillierte 1:1 Zeichnungen der Originale sowie zwei Nachbauten zu präsentieren. So sollten mögliche ursprüngliche Verwendungszwecke dieser einzigartigen Objekte erforscht und außerdem die Möglichkeiten der Reproduktion ähnlicher Röhren ausgelotet werden. Sind sie Teile eines Instruments oder einer Instrumentengruppe? Stammen sie aus der frühen Bronzezeit oder aus der späten Eisenzeit? Falls Teile fehlen, welche waren das und welche Funktion hatten sie?*

The Killyfaddy four are a group of four wooden tubes which were discovered in 1837, in the bog of Killyfaddy, near Clogher, Co. Tyrone. W. R. Wilde wrote of them in 1857[1]:

"Four pipes of wooden tubing each averaging 28 inches in length, and about 2 inches in diameter, and so constructed as to fit one into the other at their extremities. When played together they would form a tube 9 feet long and making two thirds of a circle. They were formed by first splitting the wood, then hollowing out the centre, and afterwards bringing the sides together. The most curious circumstance connected with this instrument is the mode in which the sides were ingeniously joined by copper rivets, many of which still remain. It is said that, when found, there was a thin, ornamented brass plate extending along the joinings."

The tubes survive as Wilde described them though he did not mention that three are similar in length (72 cm and in width (external 4cm) and with a cylindrical internal bore of 22 mm while the fourth differs in that it is shorter (length 67 cm) and there is a definite carved 'male' fitting with a clear edged shoulder arrangement that appears to have accommodated an extension which is missing (Figs. 11–14). All four tubes have approximately the same diameter along their internal bore though three have been sanded or rubbed smooth on the inside surface, while clear chisel marks can be seen on the fourth.

In 2002 the tubes were formally identified by Dr. Ingelese Stuitz as being fashioned from yew wood and a carbon dating test was performed by J. Vanderplicht, Radio Carbon Laboratory, Groningen, The Netherlands, which established the age of the artefacts at 2340 BP + or – 30 (March 2002).

The unusual nature of the Killyfaddy four, their rarity as an archaeological find from the early Iron Age in Ireland and the fact that all four were probably made at the same time and by the same hand, serves to pose two fundamental questions regarding how they may have been originally assembled, or not, and for what purpose.

a. Are the four component parts of a single instrument (Figs. 1 and 7)?
b. Is each an instrument in its own right or a section that was combined with other parts that are now missing (Figs. 1–5)?

If the artefacts are four component parts of a single instrument then they may have served as skeletal parts of a long *trumpa* having a cylindrical bore along most of its length. Its positioning in the early Iron Age might indicate that it was a predecessor to the great sheet bronze *trumpas* which emerged two centuries later (Fig. 9). If however, each piece is an instrument in its own right, the four tubes may have been a group of instruments or parts of instruments representing an evolution from the cast bronze horns which had been so prevalent up to three centuries earlier (Figs. 1–5)[2].

1 Wilde 1857, 245.
2 O'Dwyer 2004, 40–41.

Thus, were the Killyfaddy four a continuation from the Bronze Age, an evolution into the Iron Age or a transition between the two (Figs. 8–10)? In an attempt to resolve some of these questions it was decided to present photographic images, actual size drawings and two dimensional plywood dummies of the four tubes to the 4th Symposium of the International Study Group on Music Archaeology where the participants were invited to express their opinions through experimentation with tube positioning and from previous experiences that they had had with other similar examples. It was hoped that a majority consensus would be reached which might indicate a likely answer. In the event it was both very interesting and frustrating to note that the conference was evenly split on the issue.

On the one hand, participants suggested that the four tubes were component parts of a single long instrument (Figs. 6–7). Reasons given were:

1. The uniformity of the width of the internal bore of all four tubes.
2. The careful carving of the cone ends and the open ends, which appeared to fit naturally into each other. It was thought that the join points could have been sealed with an organic material such as moss, wax or glue (Figs. 11–14).
3. The fact that the bronze pins occurred in the same positioning along each split of all four tubes indicating that the whole length was bound with bark or leather and subsequently riveted in place.
4. The single 'other join end' with its distinctive raised shoulder edge that suggested the one time existence of an extra tube added on (Possibly a conical bronze or animal horn bell) (Fig. 12).

Other members of the conference suggested that the tubes could have been four separate instruments that had been made at a horn workshop and designed to be played together as an ensemble (Figs. 11 and 1). In this instance the reasons given were:

1. A single wooden *trumpa* of 3 meters would be unstable in its assembly and impractical to play or carry.
2. The fact that three of the tubes are the same length, width and have similar internal bores should indicate that each would produce the same fundamental note. They could then be played together as single note 'vary tone' instruments to encourage multiple harmonic and overtone sounds in a similar fashion as can be achieved with cast horns from the earlier Bronze Age[3]. The fourth might have had an extension attached to supply a lower relative note to the overall sound.
3. Perhaps it would not be possible to play the fundamental note of one long instrument due to the narrow cylindrical bore relative to the overall length.

It emerged that each of the two scenarios could be the correct interpretation and both were probably equally likely. There is still hope that further investigation will produce notable evidence one way or the other. In the meantime the mystery is unresolved. However, there can be no doubt that the Killyfaddy four were beautifully designed and fashioned to allow a musician or musicians to play music.

When examining the possible variations of assembly, it must be remembered that changes may have occurred in the configuration of the tubes through aging and drying out of the wood. It is interesting to note however, that in all four instances, though the two halves of each tube are now separated from each other, allowing each to cure independently in the bog and then change again following their recovery in 1837, yet they match to each other remarkably accurately. This may suggest that the overall shapes of the tubes have not altered a great deal from their original 'new' state (Figures 11–14).

CONCLUSION

The Killyfaddy four experiment at the 4th Symposium of the International Study Group on Music Archaeology clearly illustrates the difficulties incurred by interpreting the nature of surviving artefacts when they are incomplete. Unfounded decisions, which may later be accepted as fact, can be made when the evidence is fragmentary at best. The conference was evenly split on the possible uses of the tubes, yet all agreed that they were most likely parts of one or more musical instruments.

It should be noted that W. D. Wilde's observations came to light courtesy of Prof. Barry Raftery, University College Dublin in July 2005 and as such were not available to the Conference members. Wilde's reference to 'a thin ornamental brass plate extending along the joinings'[4] could indicate that the tubes were parts of one instrument and that the ornamentation probably would not have been present had a further covering been bound around the outside.

[3] O'Dwyer 2004, 39–44.
[4] Wilde 1857, 245.

Thus, if all four were joined, was the resulting long tube shaped as a three quarter circle or as an elongated 'S' (Figs. 6–7). Experiments on the reproduction of the Loughnashade *trumpa*[5] established that it appeared to function more correctly when joined in the 'S' position (Figs. 7–9). It is therefore possible to speculate that the Killyfaddy four originally were joined to form a polished wooden 'S' shaped *trumpa* with, possibly a sheet bronze conical bell at the lower end and a mouthpiece at the other, being approximately 3 meters long and having a decorated bronze strip running down the full length on each side. It is also likely that such an instrument might produce a number of notes and would look both dramatic and attractive to an observer. This being the case, the Killyfaddy four are probably quite unique in the catalogue of prehistoric instruments and may have been part of the transition in Ireland from the Bronze Age into the Iron Age.

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5 O'Dwyer 2002, 193.

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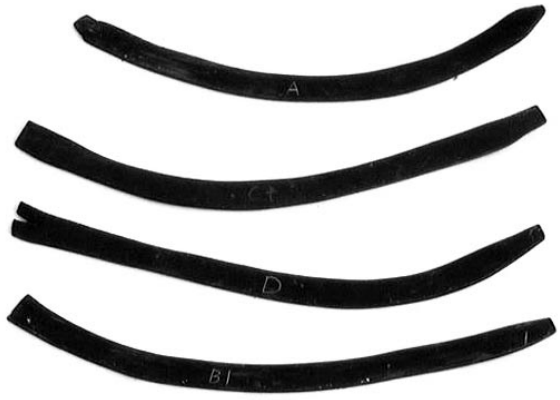

Fig. 1 The four two-dimensional 'dummies' of the Killyfaddy tubes. Their dimensions were taken from exact drawings of the originals.

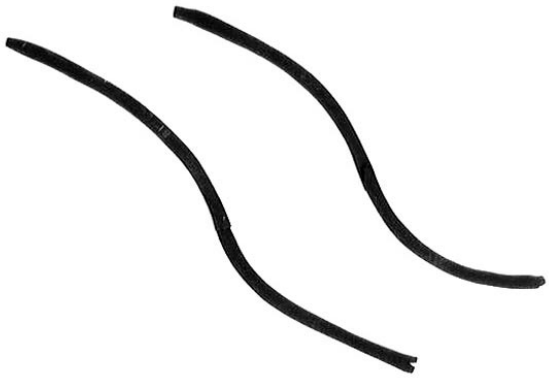

Fig. 2 Two pairs each fitted together in a shallow 'S' curve.

Fig. 3 Two pairs in circular curved shapes.

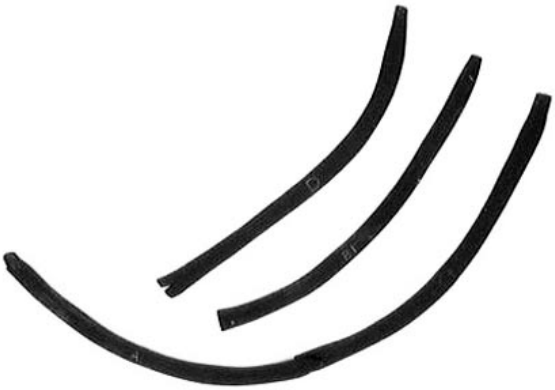

Fig. 4 Two individuals of the three similar tubes while the third is joined to the differing fourth in a circular curve.

Fig. 5 A variation on photograph 4, in the joined pair from the 'S' shape.

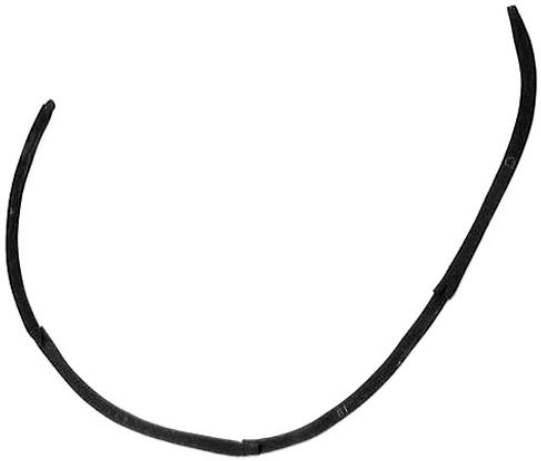

Fig. 6 All four tubes joined together making a rough three-quarter circle.

Fig. 7 The four connected in a distinctive 'S' shape.

Fig. 8 The four tubes assembled in an upright 'S' position beside a typical 'three part' horn from the late Bronze Age.

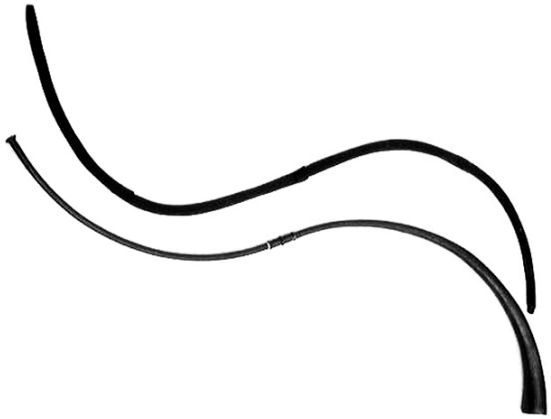

Fig. 9 The 'S' position placed beside the middle Iron Age trumpa known as 'the Ardbrinn'. A remarkable similarity of shape is evident between the two.

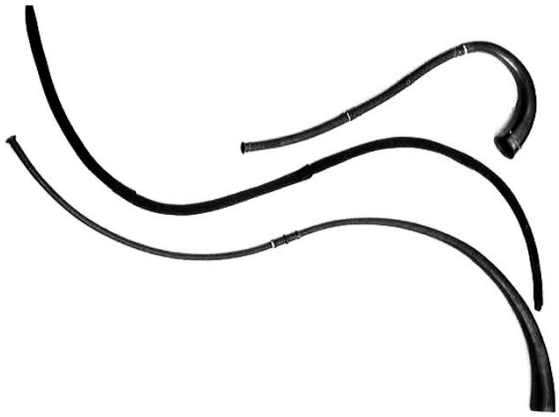

Fig. 10 The Killyfaddy four 'dummies' in the 'S' shape with the late Bronze Age horn on the right and the Iron Age *trumpa* on the left. Is there a suggestion here of a transition from the Bronze Age into the Iron Age?

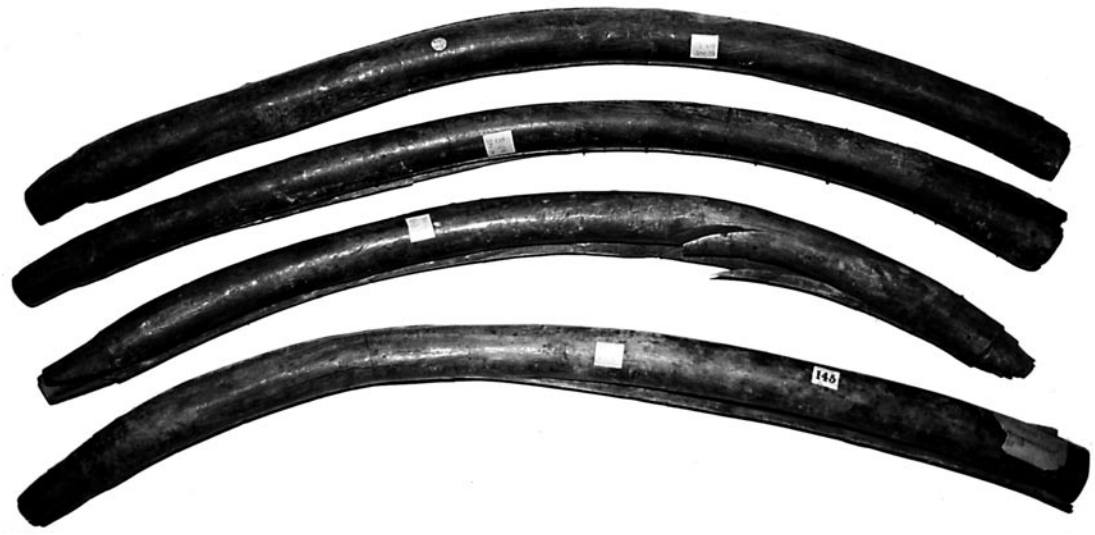

Fig. 11 The Killyfaddy four. The three similar tubes can be seen with the differing one second from the top.

Fig 12. Three open ends are clearly visible while the fourth is definitely a different arrangement. A sharp edge or shoulder may indicate that a cone or bell of sheet metal may have been fitted over the wood.

Fig 13. The four tubes viewed from the other ends. All of these carved cones appear to be very similar in design though the distortion occurring from long immersion in a bog means that this is not a certainty.

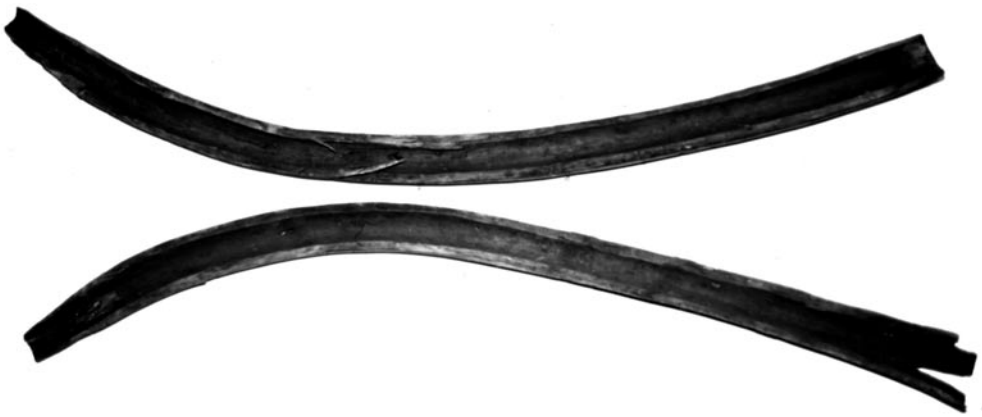

Fig 14. A view of one of the tubes opened out to show the fine carving of the internal bore. Such excellence might compare favourably with many modern wooden wind instruments.