Music or Mechanics? Understanding the Role of a Bagpiper’s Arm

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ABSTRACT

Despite their many organological and esthetical differences, bagpipes are all played thanks to the movement of the arm on a bag, creating enough pressure to activate the reeds and produce sound. Repertoires, scales and registers vary according to the instruments and their musical cultures, going from a fully chromatic scale over two octaves (such as the uilleann pipes from Ireland) to a diatonic scale within a range of a sixth (such as the Greek tsampouna or the Tunisian mizwid). Unlike fingerings and melodic ornamentation, the musician’s arm technique is rarely discussed in bagpipe literature, nor is it particularly verbalized during a piper’s tuition. According to Simon McKerrell, ‘each player learns it individually and develops their own technique’ [1]. Despite this lack of verbalization, bagpipe experts seem to agree that the breathing technique and the bag are essential elements of their playing [1],[2].

In this research, carried out during the Geste-Acoustique-Musique program (Sorbonne Universités, Paris), we endeavor to understand how the bagpiper exerts control on his/her bag. Understanding this may enhance our comprehension of the importance of the arm in a musical context. Our main questions are: what role does the arm have in the control of the instrument? Is the bag controlled with musical intention? Leading from this, further questions can be asked such as how does this influence the instrument’s repertoire and the musician’s performance?

To answer these questions, we will present data collected during three experiments in different cultural contexts and with musicians of different levels. Using acoustic equipment, we were able to measure the insufflated airflow, the pressure in the bag, the angle of the arm as well as make videos and record the sound. In order to complement our scientific data, we carried out an online questionnaire, which allowed us to gather information on the perception of musicians and their subjective impressions on the control of their instrument. With acoustic measurements, qualitative data and an ethnomusicological framework, this research offers a multidimensional and interdisciplinary study of the control of the bagpipe’s bag.

REFERENCES