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AFTER THE *Harmonie Universelle* BY Marin Mersenne (1636),
WHAT FINGERING FOR THE **CHABRETTE** IN 2016?

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1. SCIENTIFIC CONTEXT

In 1636, Marin Mersenne publishes his *Harmonie Universelle, Contenant la Théorie et la Pratique de la Musique, ou est traité de la Nature des Sons, & des Mouvements, des Consonances, des Dissonances, des Genres, des Modes, de la Composition, de la Voix des Chants, de toutes sortes d’instruments harmoniques*.

In Book Five “On Wind Instruments”, two sets of bagpipes are illustrated on separate plates.

The first one, *Cornemuse des bergers* (i.e. the shepherd’s bagpipe) has a monoxyle chanter (made from one piece of wood) with two drones [Figure 1].

The second one, *Cornemuse de Poictou* (in reference to the french province of Poitou) has a composite chanter and one drone [Figure 2]. These two types of chanter are reproduced several times in the book.

The **chabrette** borrows from these two bagpipes: the chanter is the same as the *Cornemuse de Poictou* but a small drone of medium length is set on a box while the bass drone is bigger and borne on the arm. Based on a known corpus of tens of ancient pieces, this instrument has been rebuilt since the seventies.

![Figure 1 – Cornemuse des bergers](image1)

![Figure 2 – Cornemuse de Poictou](image2)

2. OBJECTIVES OF THE WORK

What fingering for the **chabrette**?

This bagpipe is often played in Limousin1 and compared to its two geographical neighbours, the **cabrette** (in Auvergne) and the **musette du Centre** (in Berry-Bourbonnais-Nivernais). Naturally, the fingerings of these three instruments are often confused because of their proximity.

The chanters of the **cabrette** and the **musette** are made from one piece of wood whose internal bore is continuous. The employed fingers are relatively well known and established. They are semi-closed and each note is composed of an ensemble of holes, open or closed. The general rule is that the lower hand closes when the upper hand opens.

![Figure 3 – Hautbois de Poictou](image3)

Identical to the *Hautbois de Poictou* presented by Mersenne [Figure 3], the melody pipe of the **chabrette** is composed of several pieces, with its flaring bell quite detached from the main body on which it is set [Figure 4]. A keywork (covered by a fontanelle) enables the player to reach the subtonic or leading tone of the oboe. All these characteristics point to a specific functioning. There is a need to define a comprehensive, precise and reliable fingering for the **chabrette**, just like for any instrument.

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1 https://fr.wikipedia.org/wiki/Chabrette
3. METHODS

Initially, the cabrette’s semi-closed fingering was used for the chabrette after the former replaced the latter in Limousin during the twentieth century. Marin MERSENNE’s work has been long known for its representations of these bagpipes of the seventeenth century, identical to our chabrettes. If the lecture and interpretation of the drawings are immediate, the same is not true for the text. The author describes the flutes in a relatively complete manner and relies on them for the oboes and bagpipes.

“Tout ouvert” (i.e. everything open) is mentioned several times in addition to the “tout fermé” (i.e. everything closed).

The first mention “tout ouvert” clearly means that the highest note can be obtained by keeping all the holes open, both on the flutes and oboes.

The second indicates the fundamental note of the oboe, with all the holes plugged. Likewise, many tablatures clearly show a “trou par trou” opening (i.e. hole by hole), where the following note is obtained by lifting the finger on the next hole. Thus, the highest note can be obtained by lifting all the fingers.

Marc ECOCHARD² furthers our understanding of MERSENNE’s description of the fingerings at that time, when he uses the term “doigté naturel” (i.e. natural fingering) for this playing technique.

2 Les hautbois dans la société française du XVIIe siècle, une approche par l’Harmonie universelle de Marin MERSENNE et sa correspondance - 2001

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**Figure 3 – Hautbois de Poictou**

**Figure 4 – Chabrette - Chabretaire**

**Figure 5 – MERSENNE’s Tablature**

**Figure 6 – Quote “C sol ut tout ouvert”**
4. RESULTS
As said before, the cabrette’s technique of combining semi-closed holes was used by many musicians. But, as I went along in an empirical but nevertheless musical way, I realized that opening hole by hole was much more satisfying, as shown by the illustration on the right. While inventing new playing techniques for the chabrette, I wonder about what fingering to employ. As research progressed, as instruments were remanufactured, after many reed-making attempts, after many confrontations, I realized that the initial fingering was borrowed from other traditions of bagpipes adopted in the region, and thus remained unsatisfying.

The complete fingering [Figure 7] can be read in 3 steps:
- First, we are interested in the basic notes forming a diatonic scale, starting from the fundamental note (G highlighted in blue) [Figure 8],
- The alterations, with fork fingering, in grey [Figure 9];
- The vibratos, represented on the edge of the used hole [Figure 10].

5. DISCUSSION
As we all know very well, and to cite but two examples, the Uilleann pipes as well as the Great Highland Bagpipe have their own fingerings and no one would even think of questioning these fundamentals… Therefore, it appears possible, important, and necessary to build the same principles for the chabrette. This new technique is detailed in an online publication3.

6. CONCLUSION
The chabrette has been rebuilt and played again for forty years now. But it is only in the last ten years that reflections on its use have empirically led to precise functional elements. Marin Mersenne’s representations of instruments have always been a reference for me. It is quite remarkable to find (again) consistent elements after almost four centuries. Some of them derive from a technique that was presumably already well established and perfected in the 17th century.