


Article

Baschet's *Voice Leaf*: The voice wrapped in the sculptural leaf

Olivia Louvel 

Fine Art Department, Digital Music & Sound Arts Department, University of Brighton, UK

This article introduces the *Voice Leaf*, an outsider among Baschet's numerous sound sculptures because of the use of the performative voice. Conceived in 1965 by French pioneers Bernard and François Baschet, the sculpture for voice consists of a stainless steel sheet folded as a leaf using origami technique. This article explores how voice and sculpture interplay acoustically by evaluating the voice's agency and the sculpture's aural dynamic gain. In this mutualist relationship, multiple senses are mobilised: aural, visual and haptic. The voice harboured in the sculptural leaf gains materiality and a resonance altered by the sculpture's intrinsic properties. The article draws from conversations at the Structures Sonores Baschet Association open day with chairperson Pierre Cuffini and former workshop and acoustics research director Frédéric Fradet, as well as an interview with multidisciplinary artist and long-term collaborator of Bernard Baschet, Sophie Chénét.

(Received 19 March 2024; revised 24 November 2024; accepted 24 November 2024; First Published online 7 April 2025)

1. Introduction

1.1. Origin

Throughout the twentieth century's hybridisation of the arts, artists conceived works increasingly at the border of sculpture and instrument: sound sculptures. In the 1960s, sculptors took an interest in exploring the inherent sonic quality of the sculptural material. For example, Harry Bertoia began developing his *Tonal Sculptures* from various materials such as brass, bronze, or aluminium, coining the term *sonambient* to describe this novel form of sound environment when the sculptures were collectively played in his barn (Bertoia n.d.); Robert Rutman introduced his *Steel Cello*, made from stainless steel in the late 1960s (Rutman n.d.); and the Baschet brothers conducted in-depth acoustic research with various sculptural materials as early as the mid-1950s (Figure 1).

Among the numerous sound sculptures produced by the Baschet brothers (notably the *Cristal Baschet* in 1952), one draws attention: the *Voice Leaf* (1965), also known in French as *Tôle à Voix*. Designed by pioneers of sound sculpture Bernard and François Baschet, the vibrating sculpture for voice consists of a large stainless steel sheet folded as a leaf, with the addition of four vertical strings sitting at the back on an axis (Structures Sonores Baschet 2017: 10) (Figures 2 and 3).

This article will discuss the acoustic and energetic interplay between the voice and Baschet's *Voice Leaf* from a cross-disciplinary perspective at the border of sound and fine art. Voice and sculpture are ostensibly two contrasting matters: the first, in its aggregate state, is invisible, ephemeral and transient, whereas the second is visible, mostly solid and undoubtedly tactile. The interplay between the voice and sculpture is the subject of a broader doctoral research, which investigates their manifold cooperative and mutualistic relationships in the fields of music, sound art and new media.

Corresponding author: Olivia Louvel; Email: info@olivialouvel.com

Cite this article: Louvel O. (2025). Baschet's *Voice Leaf*: The voice wrapped in the sculptural leaf. *Organised Sound* 30: 53–57, <https://doi.org/10.1017/S1355771824000359>

First, it would be helpful to clarify the terminology employed by the Baschet brothers to describe their work. Because their practice is hybrid, operating between music and fine art, they adapted their terminology to distinguish their work according to its fluid application. They referred to *sound structures* for 'the sculptures used by our musician friends' and *sound sculptures* for 'those intended for museums and art galleries' (Baschet 2007: 137).¹

The *Voice Leaf* is undoubtedly an outsider in the sound world of Baschet because of the use of the performative voice. Surprisingly, it appears it was not initially conceived for voice but designed for its potential as a string instrument. Knowledge of its origin relies on the remnants of oral transmission since no documentation is available to retrace the circumstances of its creation. Chairperson of the Structures Sonores Baschet Association and specialist in Baschet pedagogy, Pierre Cuffini, relates the story as follows. In the early 1960s, an Indian dancer interested in tanpura – a long-necked plucked string instrument from India – visited the Baschet association with a group of performers. This visit led Bernard Baschet to initially conceive the *Voice Leaf* for strings. Nevertheless, the Indian performer, after experimenting with the instrument, eventually sang through the stainless steel sheet, and so the instrument fulfilled two functions: a string instrument and a vocal dimension (Cuffini 2022). It is the latter that is of interest here.

1.2. The Structures Sonores group

The Lasry-Baschet Structures Sonores group emerged following a meeting between François Baschet and Jacques Lasry at a literary cabaret on the Paris Left Bank in 1955. The group's name was later shortened to Structures Sonores. The Structures Sonores group was formed from the partnership of pianist and composer Jacques Lasry, organist Yvonne Lasry and the Baschet brothers. Sculptor François Baschet trained in sculpture with Emmanuel Auricoste and Hubert Yencesse but was self-taught in acoustics. Engineer

¹'Nous conviendrons d'appeler "structures sonores" les sculptures utilisées par nos amis musiciens et "sculptures sonores" celles destinées aux musées, aux galeries d'Art', translated from French by the author.



Figure 1. A series of Baschet sound sculptures with the Voice Leaf situated at the front right. Structures Sonores Baschet Association, Saint-Michel-sur-Orge, France, 2022. Photo: Olivia Louvel.

Bernard Baschet trained at the École Centrale de Paris before joining the Groupe de Recherches Musicales (GRM) at Maison de La Radio circa 1965, working alongside Pierre Schaeffer on his *Treatise on Musical Objects: An Essay across Disciplines* (Structures Sonores Lasry-Baschet 1978: 2; Schaeffer [1966] 2017).² The Baschet brothers, who conceived their first series of assembled sound sculptures in the mid-1950s, complemented one another in terms of skill sets, as Bernard observed in his essay ‘Structures Sonores’:

François is at the base of this development, on the one hand, because of his disconcerting inventive fertility, and on the other hand, because of his training and vocation as a sculptor. I myself am more interested in the architectural and compositional aspects of the work due to my training as an engineer and my experience as a composer (Baschet 1975: 8).

Today, their legacy is preserved by the Structures Sonores Baschet Association, established in a barn in Saint-Michel-sur-Orge – the former home of Bernard Baschet – and includes ‘musical instruments, sound sculptures, historical monuments, albums, soundtracks, a pedagogical methodology for sound education and a philosophy of art’ (Structures Sonores Baschet n.d.a).

2. Sound materiality: a voice applied to material

2.1. A direct contact, a tactile encounter

Performance art is at the root of the Structures Sonores group. In the early 1950s, the newly founded association Lasry-Baschet was a perfect match for this innovative group. The Lasry performers craved new sound experiences, and the Baschet brothers sought

²Exhibition leaflet consulted at the National Institute of Art History (INHA), Paris.



Figure 2. Baschet, the Voice Leaf, 1965. Bernard et François Baschet © ADAGP 2024.

performers willing to embark on their experimental sound territory. During a tour, François Baschet and Jacques Lasry conceived the idea of:

[m]aking new instruments on the principle of producing sound from the metal not by electronic means, but by a grooved metal rod attached by a wooden bridge to a plastic vesicle. (Structures Sonores Lasry-Baschet 1978: 1)

In the late 1940s, under research led by Pierre Schaeffer with *musique concrète*, electroacoustic musicians explored the materiality of sound through the recording and the manipulation of everyday concrete sounds. Searching for correspondence between ‘sounds and shapes’ (Structures Sonores Lasry-Baschet 1978: 1), the Baschet brothers developed a singular strategy to produce acoustically what *musique concrète* emulated electronically. To put this into practice, they designed innovative hybrid sculptural instruments, choosing materials for their intrinsic sonic properties and their capacity for resonance. Furthermore, the Structures Sonores group investigated how materiality could generate tones by expanding their sculptures into musical instruments. Their research led to the development of two types of instruments, some producing ‘sounds by stroking’ and others by ‘percussion’ (ibid.).

Sound artist and director of Taller de Escultura Sonora Baschet (Taller Baschet n.d.) Martí Ruiz points out how for the Baschet brothers *musique concrète* ‘lacked a direct, tactile, intuitive vehicle with instruments’, whereas with the Baschet sound sculptures, it was possible to produce innovative sounds quite like the sounds produced by electronic means in electroacoustic music, but ‘with a

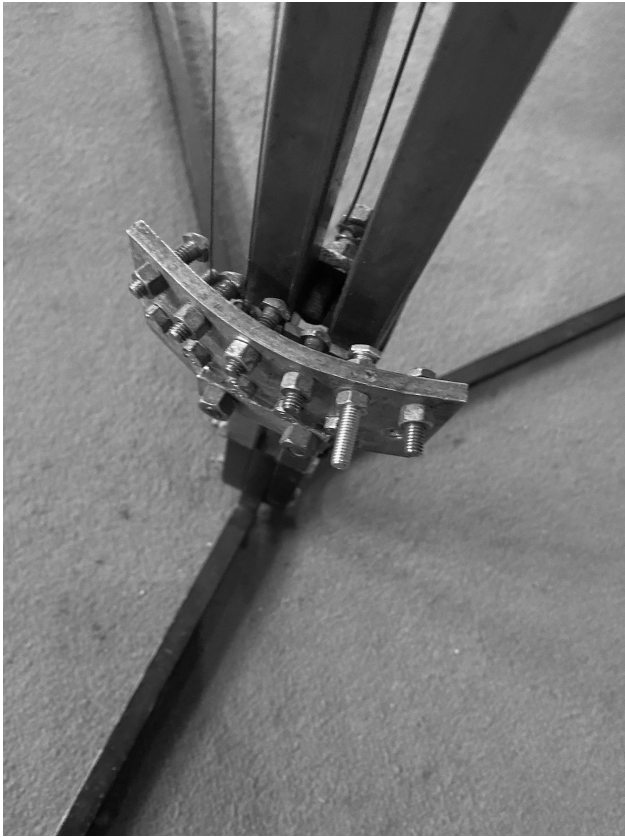


Figure 3. The strings of the *Voice Leaf*. Structures Sonores Baschet Association, Saint-Michel-sur-Orge, France, 2022. Photo: Olivia Louvel.

direct contact with the object' (TEDx Talks 2018).³ With Baschet's *Voice Leaf*, the performative voice is applied to and through the sculpture's material. In this direct contact with the sculptural object, the whole corporeal sensorium is engaged through a haptic encounter – the body as a tactile receptor. Throughout their practice, the Baschet brothers continually reinforced an invitation to tactility. In *Les Sculptures Sonores*, François Baschet recalls how, in April 1964, the Museum of Decorative Arts in Paris invited him and his brother to present their sound sculptures. The duo installed their sculptures in four rooms named the 'Please *do* touch' rooms (Baschet 1999: 106).

2.2. Sonic properties of the material: vibration and amplification

The initial purpose of the *Voice Leaf* shifted over time through experimentations. Pierre Cuffini reveals that the explanation behind this change of status lies in the thickness of the stainless steel sheet, which is much thinner than the other Baschet sound sculptures and, therefore, more vibrant. Cuffini identifies three key parameters that determine the resonance of the sound sculpture: first, the thickness of the sheet; second, the material used; and third, its shape (Cuffini 2022). In 'Structures Sonores', Bernard Baschet details how the *Sound Structures* function, categorising critical elements as follows:

a) an excitatory (stimulating) element; b) a vibrating element; c) a resonant element, which produces the tones; d) an element that radiates through the

³Les faltaban el vehículo directo, táctil, intuitivo con los instrumentos', 'Con ese vehículo directo con el objeto', translated from Spanish by the author.

air (coupling); between (b) and (c), we are introducing a new sound collecting element. (Baschet 1975: 11)

The sculpture at rest possesses potential energy. When a vocal force acts upon it, the sculpture responds and produces sound waves – or mechanical waves – according to its acoustic design principles. Made from a thin stainless steel sheet (0.3 mm),⁴ the leaf can move subtly and vibrate. The voice is collected and thoroughly amplified when projected against and inside the material. This explains why this reflective material led the Indian performer to play and experiment with her voice since the stainless steel material acts as a natural amplifier of the voice. The agentive voice activates the sculpture's resonance, generating a considerable dynamic response of frequencies, amplitude and velocity. Through the conduit of sculpture, the voice is mediated and altered by the sculpture's intrinsic sonic properties. With the voice, the sculpture's status expands from static to dynamic: acoustically empowered, it gains aural agency and momentum.

The bright resonance of the *Voice Leaf* contrasts with the other Baschet sound sculptures, which are often made from materials such as aluminium, steel, copper, or even plastic and are, therefore, less reverberant than stainless steel. Pierre Cuffini underlines how the Baschet sound sculptures require the performer to cultivate a material-oriented strategy with the sound sculpture and genuinely start their performance from the material itself – 'material first!' (Cuffini, 2022).⁵ Furthermore, Cuffini emphasises how the plasticity of the sound sculpture in the making must be determined by the acoustic properties and sound research of the material prior to the aesthetic choice of the rendered shape.

2.3. Sophie Chénét's bespoke Voice Leaf: a hand-folded material

The Baschet sound sculptures can exist autonomously without the performative element. As sound art theorist Kersten Glandien puts it, they can 'lead a double life, both as silent gallery objects and concert instruments' (Glandien 2012: 267). Still, each sculpture's dynamic agency would be neglected without the interaction of a performer activating it.

A long-term collaborator of Bernard Baschet, trailblazer Sophie Chénét has been exploring the possibilities of the sound material of the Baschet Structures Sonores for 30 years. This multidisciplinary artist, whose performative practice lies at the intersection of experimental music and fine art, spontaneously refers to 'her reservoir of sound colours and materials'⁶ to illustrate her process with sounds (Chénét 2021). For over 20 years, she has been co-leading the art group Caméléon, whose artistic endeavour is to unite 'sound, fine arts and spoken words' (Chénét n.d.). Classically trained in harp and self-taught in double bass, she developed her vocal practice by joining a choir, nourished by a familial environment, which encouraged vocal practice. When Chénét discovered the *Voice Leaf* in the mid-1990s, she was already versed in Baschet instruments, as she played a multitimbral percussion, also custom-made by Bernard Baschet. In the early 2000s, Bernard Baschet conceived a bespoke *Voice Leaf* for her, adding wheels for enhanced mobility and customising the array of strings. Chénét witnessed first-hand Baschet's agile skills when birthing her voice sculpture, as he hand-folded the stainless steel sheet, applying origami technique (Chénét 2021). The three-dimensional

⁴The larger *Voice Leaf* is made from a stainless steel sheet of 0.5 mm depth.

⁵D'abord le matériel', translated from French by the author.

⁶Un réservoir avec des couleurs sonores, des matières', translated from French by the author.

sculpture emerged with the two leaves organically sculpted. Her bespoke *Voice Leaf* is a mobile instrument that can be deployed on stage or in the street. She proposes with the *Voice Leaf* a performative work, *Gradual and Light Displacement of Sound Poetry*, which is conceived to inhabit heritage places and respond to their acoustic principles (Chénet n.d.). The added wheels allow Chénet to redirect the sound sculpture according to her convenience and change the sound diffusion trajectory in the sound space.

3. Voice and body: wrapped in sculpture

3.1. Corporeality

Corporeality is key in this sculptural instrument, which functions as an extension of the body. In the audiovisual *Tôle à voix Baschet en plein champ*, Sophie Chénet performs with the *Voice Leaf* in an open field (Chénet 2014). She appears enveloped in the sculpture, her head positioned inside as she projects her voice into the leaf. Unusually, her back is facing the audience. The faceless performer is engulfed within the sculpture, united with its matter. Chénet reveals that she is aware that her back also propels the sound; in fact, the whole body is mobilised when singing (Chénet 2021). This unusual configuration challenges the performance convention of a frontal display and reinforces the merging of the body and sculpture into one: in symbiosis. Turning the back to the audience does not hinder sound clarity, as the *Voice Leaf*'s panel reflects the voice to the audience.

Similarly, this corporeal aspect is present in Jacques Barsac's film *Sculptures Sonores Baschet* (1982). An online excerpt shows how Bernard Baschet operates the *Voice Leaf* and performs vocals in front of the stainless steel panel while manipulating some strings at the back of the leaf (Barsac 1982) (Figures 4, 5 and 6).

Improvisation skills befit this plastic strategy of the voice. Sophie Chénet points out the commendable legacy of vocalist and improviser Annick Nozati (Montaron 2012), who performed extensively with the *Voice Leaf* in the 1960s/1970s, as well as more recently vocalist and educator Cathy Tardieu (2019), who also specialises in the Cristal Baschet (Chénet 2021). Bernard Baschet's approach consists of improvising long sustained vocal notes, which are amplified by the sculpture's material and sound like drones. In this encounter, two instruments merge, with the voice considered to be 'the original instrument' (La Barbara 1976). The two performers of the *Voice Leaf* appear 'in touch' with their voices as they become one with the sculpture, wrapped in its protective leaf, and thoroughly engaged in a sensory interactive relationship. The name in English conveys this wrapping notion poetically, whereas, in French, *Tôle à Voix* translates perhaps too literally as the voice sheet or the voice metal. With the French title, we lack the enveloping dimension of the sculptural leaf, which the word *leaf* conveys.

In this relational corporeality, the interplay is both dynamic and symbiotic. The sculpture is a host that harbours the transient voice – a symbiont – and accommodates it intermittently when performed, and, as such, the sculpture provides defined reflective and dynamic boundaries for the voice.

3.2. The inward space

The voice we hear is not the voice the others hear. We often recoil when we hear our voice recorded, experiencing a feeling of disconnection from our voice. How to feel in touch with one's vocal entity? Perhaps with the *Voice Leaf*, one can feel the intrinsic sonic qualities of one's own voice amplified inside the sculpture. Its enveloping dimension and corporeal wrapping of the body



Figure 4. Jacques Barsac, *Sculptures Sonores Baschet*, 1982, performance by Bernard Baschet. Bernard et François Baschet © ADAGP 2024.



Figure 5. Jacques Barsac, *Sculptures Sonores Baschet*, 1982, performance by Bernard Baschet. Bernard et François Baschet © ADAGP 2024.

increase the sensorial engagement with the voice. Relating her experiential outcome, Sophie Chénet reveals how she enters the sculpture, describing the sensation of being inside as a profound experience. She perceives her encounter with the *Voice Leaf* as 'a circulation' and adds, 'it is the voice in a place, but it is the whole body resonating' (Chénet 2021).⁷

This corporeal resonance of the voice departs from the inside. The voice's trajectory relies on the abdomen, diaphragm and chest muscles to regulate the air pressure causing the vocal cords in the voice box (also called larynx) to vibrate, thereby changing air pressure into sound waves, to then sound through the resonating chamber, also called the vocal tract (pharynx) (The Voice Foundation n.d.). Once sung, the voice both bounces onto and off the material to return to the performer, thus infiltrating their body. Chénet explains that this voice circulation can sometimes appear abyssal, like a sensation of being engulfed in the sculpture's vibration in the inward space (Chénet 2021).

Sophie Chénet relates how the immersive qualities and sensorium experience of the *Voice Leaf* have been explored by Romain Pomedio, a researcher specialising in the plasticity of cognition who began developing workshops for autists in the early 1980s.⁸ At the Baschet Structures Sonores Association, pedagogy has been at the core of an inclusive practice led through workshops with

⁷'C'est la voix à un endroit mais c'est tout le corps qui résonne', translated from French by the author.

⁸These workshops led to the documentary *Images Sonores. Autistes et instruments de musique Baschet* directed by Marion Schmit (1990).



Figure 6. Jacques Barsac, *Sculptures Sonores Baschet*, 1982, performance by Bernard Baschet. Bernard et François Baschet © ADAGP 2024.

autists and children with special educational needs. Towards the end of the 1970s, the Baschet Educational Instrumentarium was created for educational purposes to propose a broad sound palette accessible to children. Bernard Baschet stated: ‘In the visual arts, we give children colours to be creative, but we don’t do that for sound. That is why I wanted to create a “palette of sounds!”’ (*Structures Sonores Baschet* n.d.b). The aim was to develop perception and sensory connection, thus improving cognitive function and language playfully without requiring music knowledge.

4. Conclusion

With the *Voice Leaf*, voice and sculpture interconnect with multiple senses mobilised: aural, visual and haptic. The sculpture acts as the sound recipient, harbouring and amplifying the performative voice into the sound space. The *Voice Leaf* warrants a performance of contact, where the performer or activator wrapped in the leaf of the sculpture is in touch with their voice, engaged in a sensory relationship. Through a corporeal and material interplay with sculpture, the voice is applied to and through the material. The stainless steel sheet alters the sonic quality of the human voice. The invisible matter of voice collides with the fixed matter of sculpture: sculpture gains aural dynamism. It is a bi-directional dynamic interplay that exchanges sonic and energetic properties. Finally, the agentive voice gains temporary reification beyond its aggregate state through its encounter with sculpture.

This article remedies the lack of textual documentation on the *Voice Leaf*. It sheds light on a little-known work of the Baschet brothers that has been overlooked in the historical and theoretical discourse of music and fine art. It thereby allows us to bring into the light the legacy of this singular sculpture for voice, a *voice sculpture*, in fact, the only one in the extraordinary palette of Baschet sound sculptures.

References

- Baschet, B. 1975. *Structures Sonores* (1968). In J. Grayson (ed.) *Sound Sculpture*. Vancouver: A.R.C. Publications, 1–12.
- Baschet, F. 1999. *Les Sculptures Sonores*. Chelmsford: Soundworld Publishers.
- Baschet, F. 2007. *Mémoires Sonores*. Orléans: L’Écarlate/L’Harmattan.
- Bertoia, H. n.d. *Sonambient*. www.harrybertoia.org/sonambient (accessed 17 July 2024).
- Chénet, S. 2021. Interview by Olivia Louvel [WhatsApp], 25 November.
- Chénet, S. n.d. Gradual and Light Displacement of Sound Poetry with the Baschet Voice Leaf. www.compagniecameleon.fr/chantier/wp-content/uploads/impromptus-Tôle-à-voix-baschet.pdf (accessed 18 July 2024).
- Cuffini, P. 2022. Interview by Olivia Louvel [Structures Sonores Baschet Association, Saint-Michel-sur-Orge, France], 22 January.
- Glandien, K. 2012. SoundArt and Performativity. In A. Brown (ed.) *Sound Musicianship: Understanding the Crafts of Music*. Newcastle upon Tyne: Cambridge Scholars Publishing, 64–276.
- Montaron, A. 2012. Portrait de la vocaliste Annick Nozati. *France Musique*, 31 December. www.radiofrance.fr/francemusique/podcasts/a-l-improvisiste/portrait-de-la-vocaliste-annick-nozati-8566113 (accessed 17 October 2024).
- Rutman, B. n.d. www.rutman.de/ (accessed 17 July 2024).
- Schaeffer, P. [1966] 2017. *Treatise on Musical Objects: An Essay across Disciplines*. Oakland, CA: University of California Press.
- Structures Sonores Baschet. 2017. Saint-Michel-sur-Orge: Structures Sonores Baschet Association. www.baschet.org/brochure/brochureSSB_EN.pdf (accessed 17 October 2024).
- Structures Sonores Baschet. n.d.a. Preservation of the Baschet Legacy. www.baschet.org/site/index.php/preservation-of-the-baschet-legacy-2/ (accessed 18 July 2024).
- Structures Sonores Baschet. n.d.b. Sound Education. www.baschet.org/site/index.php/sound-education/ (accessed 10 February 2024).
- Structures Sonores Lasry-Baschet. 1978. *Sound Structures Built by Bernard and François Baschet, in Collab. with Jacques and Yvonne Lasry (l’Émerveillement par les sons et par les formes)*. Jerusalem: The Israel Museum.
- Taller Baschet. n.d. Baschet a Barcelona. www.tallerbaschet.cat (accessed 17 July 2024). TEDx Talks. 2018. Esculturas Sonoras Baschet – una experiencia inclusiva de arte y Ciencia. www.ted.com/talks/marti_ruiz_esculturas_sonoras_baschet_una_experiencia_inclusiva_de_arte_y_ciencia_jan_2018 (accessed 18 July 2024).
- The Voice Foundation. n.d. *Advancing Understanding of the Voice through Interdisciplinary Research & Education*. www.voicefoundation.org/health-science/voice-disorders/anatomy-physiology-of-voice-production/the-voice-mechanism/ (accessed 16 July 2024).

Discography

- La Barbara, J. 1976. *Voice is the Original Instrument: Early Works*. New York: Wizard Records, RVW2266-LP.

Videography

- Barsac, J. 1982. *Structures Sculptures Sonores Baschet*. YouTube. www.youtube.com/watch?v=ESISUS9TzYc (accessed 15 February 2024).
- Chénet, S. 2014. *Tôle à voix Baschet en plein champ*. YouTube. www.youtube.com/watch?v=1EfQLa5o0bY (accessed 18 July 2024).
- Schmit M., dir. 1990. *Images Sonores. Autistes et instruments de musique Baschet*. www.dailymotion.com/video/x47jirj (accessed 4 November 2024).
- Tardieu C. 2019. Cathy Tardieu à la Tôle à voix Baschet au château La Fage 2018. YouTube. www.youtube.com/watch?v=wXP7nR_bDKg (accessed 17 October 2024).