REMOVING THE REED: INSTRUMENTAL IDENTITY IN *SPECTRAL BREATHING APPARATUS*

STEPHEN DE FILIPPO

Abstract (IT): *Spectral Breathing Apparatus* (2022) è un lavoro di sedici minuti per strumento a fiato a sei fori senza bocchino, elettronica dal vivo e supporto fisso. Sviluppato in collaborazione con l'oboista Niamh Dell, il lavoro elimina l'ancia per l'intera durata e costruisce il proprio linguaggio strumentale a partire da respiro, suoni della bocca, azioni delle dita, rumori delle chiavi e risonanze instabili. L'articolo considera l'assenza dell'ancia come condizione strumentale continuativa e analizza ciò che accade all'identità dello strumento quando viene rimosso il meccanismo normalmente responsabile del timbro caratteristico. La discussione colloca il lavoro nel contesto della prassi oboistica contemporanea, con particolare riferimento alla descrizione di Christopher Redgate dell'ampliamento del mondo sonoro dell'oboe e alla separazione parametrica delle azioni di bocca e dita in *the green is or* di Aaron Cassidy. Viene quindi esaminata la lettura di Dell, che descrive l'opera come una 'sottrazione della voce' dell'oboe e mette in rilievo la frizione fra abitudini strumentali incorporate e una partitura nella quale la competenza specifica dell'oboista viene spesso dislocata. L'analisi della partitura si concentra sulla notazione indipendente di bocca e dita, sul *le tchip*, sull'amplificazione e sul sistema elettronico. L'articolo sostiene che l'identità strumentale in *Spectral Breathing Apparatus* emerge in modo relazionale dall'interazione fra corpo, tecnica appresa, meccanismo fisico, notazione e mediazione tecnologica.
Parole chiave: identità strumentale; oboe; assenza dell'ancia; elettronica dal vivo; performance incarnata.

Abstract (EN): *Spectral Breathing Apparatus* (2022) is a sixteen-minute work for a six-holed woodwind instrument without mouthpiece, live electronics and fixed media. Developed with oboist Niamh Dell, the work removes the reed for its full duration and constructs its instrumental language from breath, mouth sounds, fingering actions, key noise and unstable resonances. This article considers reedlessness as a sustained instrumental condition and asks what happens to instrumental identity when the mechanism conventionally responsible for characteristic tone is absent. The discussion places the work in relation to contemporary oboe practice, particularly Christopher Redgate's account of the instrument's expanded sound world and Aaron Cassidy's parametric separation of mouth and finger actions in *the green is or*. It then examines Dell's performer-centred account of the work as an 'unvoicing' of the oboe, including the friction between embodied instrumental habit and a score in which oboe-specific expertise is frequently displaced. Close readings of the score focus on independent mouth and finger notation, *le tchip*, amplification and the electronic system. I argue that the identity of the instrument in *Spectral Breathing Apparatus* is produced relationally, through the interaction of body, learned technique, physical mechanism, notation and technological mediation.
Keywords: instrumental identity; oboe; reedlessness; live electronics; embodied performance.

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1. Reedlessness as an instrumental condition

A reed is small enough that its removal can appear, at first, to be a modest intervention. For an oboist, however, it changes the basic relation between breath, body and instrument. The double reed ordinarily acts as the vibrating source through which air is converted into the characteristic periodic sound of the oboe. It also sits at the centre of an extensive embodied practice: it is made and adjusted by the performer, held in the mouth, tested before playing, and continually negotiated through embouchure and air pressure. In the sixteen-minute *Spectral Breathing Apparatus* (2022), I removed that component for the complete duration of the work. A complete video performance by Niamh Dell, with video by Angela Guyton and mix by James Bradbury, is available online[1]. The score is designated for 'solo wind instrument (w/o mouthpiece) & electronics' and specifies that it may be performed on any six-holed woodwind instrument without its mouthpiece[2].

The distinction is consequential for the organisation of the piece. There is no conventional oboe tone to return to and no stable reed sound against which breath noise, key clicks or oral gestures register as interruptions. The absence of the reed

[1] Complete video performance: Niamh Dell, performance; Angela Guyton, video; James Bradbury, mix, *Spectral Breathing Apparatus*, 2022, available at: https://youtu.be/SRCg8-k2Viw.

[2] Stephen DE FILIPPO, *Spectral Breathing Apparatus*, score, Australian Music Centre, Sydney, 2022, performance notes.

establishes a new baseline. The performer must build continuity from sounds that conventional oboe training commonly treats as peripheral: turbulent breath, unstable whistle tones, saliva, lips, teeth, tongue, key mechanisms and the changing resonance of an unexcited bore. Amplification and electronics enlarge these materials and become part of the instrumental arrangement itself. Within this arrangement, the conventional hierarchy of sound source, resonator and performer becomes uncertain. The question of instrumental identity emerged through the practical consequences of this subtraction. The oboe remains in the performer's hands, with its familiar keywork, bore, weight and posture, while many learned relations among fingering, embouchure, breath and expected sound no longer operate in their usual way. I use instrumental identity here in this practical, relational sense: the combination of physical object, embodied technique and sounding expectations through which an instrument becomes recognisable to a performer and listener. *Spectral Breathing Apparatus* makes those relations unusually visible because the object remains familiar while one of its central sound-producing components is withheld for the full duration of the work.

2. Precedents and compositional development

Reedless playing already has an established place within contemporary woodwind practice, which contains a long history of sounds made around, through and apart from the standard sound-producing apparatus. Christopher Redgate, writing about the changing sound world of the oboe, includes 'playing the oboe without the reed' among sounds that had previously been rejected by oboists and later entered the vocabulary of contemporary performance. Niamh Dell's own repertoire prior to *Spectral Breathing Apparatus* included Mark Andre's iv 5, in which off-reed and reedless sounds form part of a wider investigation of unstable oboe technique. Reed removal therefore existed as an available action. I became interested in what would happen if

the reed were removed for the entire piece. Rather than using reedless playing briefly as one unusual sound among others, the performer would have to construct the whole performance from the sounds and physical actions available without it[3].

The mouth-based vocabulary of *Spectral Breathing Apparatus* also grew from an existing strand of my practice with amplified voice. Before composing the work, I had been using megaphones to amplify breath, saliva, ingressive sounds and other small oral noises, often holding the input very close to the mouth so that sounds normally difficult to project could become primary material. A 2022 work for violin, megaphone voice and electronics codified several of these techniques on an open staff in which vertical position indicates relative pitch or mouth shape. *Le tchip*, an ingressive squeak produced by drawing air through the teeth and lower lip, developed through this vocal practice before it entered *Spectral Breathing Apparatus*[4]. The reedless woodwind therefore met a vocabulary that was already concerned with the mouth as a site of sound production and with amplification as a way of enlarging liminal bodily sounds.

A second practical point of reference was Aaron Cassidy's *the green is or* (2003), an oboe work in which mouth and finger activity are separated onto rhythmically independent staves. Fingering, breath, articulation and embouchure can proceed without being organised primarily around a predetermined pitch[5]. *Spectral Breathing Apparatus* adapts this separation to a reedless instrument and combines it with tablature, oral sound production, proportional time and electronic synchronisation.

[3] Christopher REDGATE, *Re-inventing the Oboe*, in «Contemporary Music Review», vol. 26, n. 2, 2007, pp. 179-180; Niamh DELL, *Exploring an Embodied Musical Habitus: Harnessing Productive Resistances in the Performance of Contemporary Solo Oboe Repertoire*, doctoral dissertation, University of York, York, 2023, pp. 28-38 and 59-73.

[4] Stephen DE FILIPPO, doctoral dissertation, University of California San Diego, 2026, Chapter 4.

[5] Aaron CASSIDY, *the green is or*, score, Aaron Cassidy/ASCAP, Buffalo, 2003, performance notes.

These two strands - a vocabulary of amplified oral sound and the uncoupling of instrumental actions - came together in a score where the performer continues to inhabit the physical shape of woodwind performance while many of its usual causal relationships are loosened.

Redgate's description of a 're-invented oboe' is useful because it documents a period in which multiphonics, alternative fingerings, harmonics, expanded register, key clicks and reedless playing became increasingly integrated into contemporary repertoire[6]. His account is fundamentally expansive: the instrument acquires additional techniques and a wider field of possible sounds. Reed removal also has clearer precedents as a compositional strategy. Clarinettist Chiara Percivati describes Vinko Globokar's *Voix instrumentalisée* (1973) as a work in which the bass clarinetist removes the mouthpiece and reed, replacing the usual sound source with the performer's voice while the tube functions as resonator and filter[7]. Percivati later discusses Maria Teresa Treccozzi's *Ayre* (2015) in relation to the same subtractive premise: the clarinet is played without its reed-mouthpiece combination and becomes, in Percivati's description, a hybrid air and percussion instrument through blowing across open holes, trumpet-like embouchure, key clicks and other actions[8].

These examples matter because they make clear that subtraction can itself generate an expanded field of practice. Percivati describes the removal of the mouthpiece as creating physical and aesthetic space for actions that the complete instrument would

[6] Christopher REDGATE, *Re-inventing the Oboe* cit., pp. 179-188.

[7] Chiara PERCIVATI, *Deprivation as a means of expansion 1 - Globokar's Voix instrumentalisée*, 2018, available at: https://www.chiarapercivati.net/deprivation-as-a-means-of-expansion-1-globokars-voix-instrumentalisee/. For the score, see Vinko Globokar, *Voix instrumentalisée*, Edition Peters, EP 8285, 1973.

[8] Chiara PERCIVATI, *Deprivation as a means of expansion 2 - Treccozzi's Ayre*, 2019, available at: https://www.chiarapercivati.net/deprivation-as-a-means-of-expansion-2-treccozzis-ayre/.

constrain. *Spectral Breathing Apparatus* shares this basic premise, although its sustained reedless condition became important to me for a different reason. The reed is absent before the piece begins and is never restored. Reedlessness therefore has no contrasting conventional state within the work. It becomes the condition through which the performer encounters every gesture, transition and electronic environment.

The work was developed at a distance with Dell during 2021 and 2022 through an exchange of short recordings and practical lists of possible actions. We tested reedless whistle tones, breath attacks, inhalations, trumpet-like lip excitation, consonants, sucked squeaks and combinations of mouth and finger activity. Dell also proposed possibilities in response, and the vocabulary changed through this exchange between composer and performer[9]. Some of these experiments extended techniques associated with the oboe; others met the vocal materials I had already been developing through close amplification of the mouth.

This background is useful because it prevents the oral sounds in *Spectral Breathing Apparatus* from being understood only as additions to an extended oboe vocabulary. The work brought previously explored breath, saliva, consonants and ingressive sounds into contact with a familiar keyed woodwind whose reed had been removed. The resulting material was then codified for another performer's body. In this sense, the compositional problem involved both the altered instrument and the transmission of a mouth-based practice that had previously been closely tied to my own performance[10].

As the piece developed, the empty reed well became a point around which a different relationship between performer and instrument could be organised. The mouth blows through, sucks against, hovers above and sounds independently from the instrument.

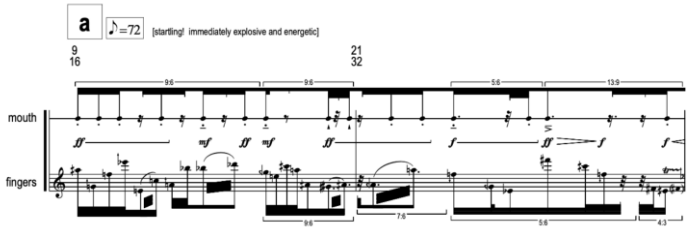
[9] Stephen DE FILIPPO, doctoral dissertation cit., Chapter 4.

[10] *Ibidem.*

The hands remain on familiar keywork, but their actions frequently create clicks, changes in resonance or small filtering effects rather than conventionally fingered pitches. A significant number of gestures are generated principally by the mouth through sucking, whistling and exhaling, while fingering becomes less decisive in shaping pitch and rhythm than it is in ordinary oboe production.

The continuing presence of the fingers nevertheless remains important. They retain the posture and tactile vocabulary of oboe playing even when their sonic authority is reduced. The player's hands continue to perform recognisably instrumental activity while the principal sounding event may come from the teeth, tongue or breath.

That condition is clearest when compared with Cassidy's *the green is or*. Cassidy's score formalises a split already latent in instrumental technique by writing mouth and fingers as independent rhythmic streams. The upper stave governs breath, embouchure, articulation and dynamics; the lower stave specifies fingered pitches. Cassidy states that the unpredictability of their decoupled interaction is intentional and that unstable or transitional results should be allowed to emerge[11]. Redgate likewise notes that the independence of these layers can produce pitches and rhythms that differ from what the written fingering alone would suggest[12].

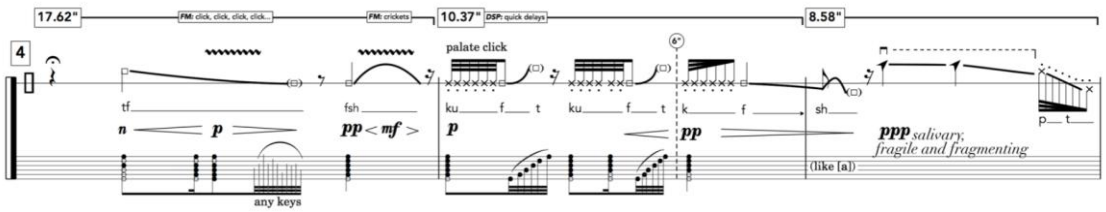


[**MUSICAL EXAMPLE 1** – Aaron Cassidy, the green is or (2003), opening system. The mouth and finger layers operate as rhythmically independent streams. Source: score supplied for analytical reference]

[11] Aaron CASSIDY, *the green is or* cit., performance notes.

[12] Christopher REDGATE, *Re-inventing the Oboe* cit., pp. 182-184.

In *Spectral Breathing Apparatus*, the dual-stave model is retained but the lower stave no longer represents conventional pitch. It becomes a six-line tablature. Black noteheads indicate depressed keys and white noteheads released keys. The mouth stave uses a set of noteheads and lines for breath, *alla tromba*, whistle tones, ingressive sounds, percussive vocalisations, kisses and other oral actions[13]. The score separates two bodily systems while the reed through which those systems would normally be coordinated into a stable oboe tone remains absent.



[**MUSICAL EXAMPLE 2** – Stephen DE FILIPPO, *Spectral Breathing Apparatus* (2022), mm. 4-6. Independent mouth gestures unfold above tablature for the fingers. Source: composer's score]

The notation is specific about duration and gesture while remaining comparatively open about sounding pitch. Mouth contours describe changes in the quality and trajectory of a sound. Finger actions continue independently beneath them. The performer is asked to make these relationships precise in time because the proportional measures are synchronised with electronic events, yet the precise acoustic result remains contingent on breath, oral shape, instrument and microphone.

[13] Stephen DE FILIPPO, *Spectral Breathing Apparatus* cit., performance notes.

3. Mouth, fingers and *le tchip*

The technique called *le tchip* became one of the clearest manifestations of this redistribution of instrumental agency. In the performance notes, I describe it as a squeak produced by placing the front teeth on the bottom lip and sucking air through the teeth. There is little resonance from the instrument; most of the sound comes from air passing through the teeth and mouth[14]. Changes of lip position and the route of the incoming air alter pitch and timbre.

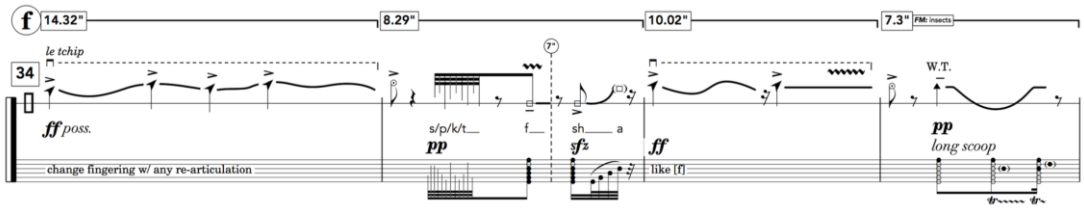
Dell's account of learning the technique shows how strongly an instrumental habit can persist even when it is no longer acoustically useful. She initially attempted to maximise the influence of the oboe by bringing her mouth close to the reed well so that the sound would reverberate through the instrument and the notated fingering changes would become more audible. This reduced some of the friction she experienced when generating and shaping sound almost entirely with her mouth. I discouraged that solution because the close position restricted lip movement, reduced the level of noise and interference, and narrowed the available dynamic range[15].

The resulting performance position is significant. Dell performs *le tchip* over the empty reed well and directs it out towards the audience rather than into the oboe. Fingering changes nuance the sound only slightly and are often heard primarily as key clicks[16]. The immediate sounding mechanism is therefore the performer's teeth, lips and ingressive breath. The oboe remains in the hands, contributes posture, key noise and a limited resonant/filtering presence, yet it no longer occupies the acoustic centre of the gesture.

[14] *Ibidem.*

[15] Niamh DELL, *Exploring an Embodied Musical Habitus* cit., pp. 63-64.

[16] *Ibidem.*



[**MUSICAL EXAMPLE 3** – Stephen DE FILIPPO, *Spectral Breathing Apparatus* (2022), m. 34 and surrounding material. Le tchip is sustained as a mouth-generated contour while fingering may change independently. Source: composer's score]

This configuration condenses a larger question in the piece. The performer is visibly holding and fingering a woodwind instrument, although the principal sounding action may occur outside it. The physical oboe remains present and continues to organise the body. The performer's training remains present as tactile and procedural knowledge. The sounding result, however, does not map cleanly onto the fingering or the resonant body in the way expected of ordinary oboe playing.

Other materials extend this emphasis on the mouth and body. Dell discusses passages involving saliva, 'wet mouth sounds', tongue movement, noisy inhalations and unvoiced phonemes[17]. These actions bring normally intermediary aspects of wind performance into the musical surface. Saliva management, preparatory breathing and incidental mouth noise are commonly minimised in standard performance; here they are timed, shaped and amplified. Unvoiced consonants such as *f*, *s*, *sh*, *t* and *k* articulate breath without a stable vocal pitch and occupy an ambiguous position between instrumental articulation and vocal action[18].

The mouth therefore becomes generative in Dell's account. She contrasts this with her standard embouchure, which she experiences primarily as reactive: a means of

[17] *Ivi*, pp. 67-70.

[18] *Ivi*, pp. 68-70.

stabilising and nuancing a sound whose source is the vibrating reed. In *Spectral Breathing Apparatus*, sucking, whistling, exhaling and changes of oral shape can determine pitch contour, rhythm and timbre directly[19]. The redistribution is audible and physical. The body becomes more exposed as a sound-producing component while the oboe's familiar voice recedes.

4. The unvoiced oboe and embodied expertise

Dell gives the most precise account of what this redistribution feels like to a performer. She describes *Spectral Breathing Apparatus* as an 'unvoicing' of the oboe, both literal and conceptual[20]. Without the reed, the instrument no longer produces its characteristic periodic tone. Dell describes the remaining bore as largely amplifying and filtering turbulence, closer in this respect to the unvoiced components of speech than to the voiced periodicity she associates with conventional oboe sound[21].
The conceptual effect is tied to expertise. Much of Dell's oboe-specific knowledge concerns the production, shaping and evaluation of reed-based sound. Reed response, tone, intonation, articulation and the familiar relationship between embouchure and air pressure cease to provide reliable measures of success. Her research develops this through Pierre Bourdieu's concept of habitus: embodied dispositions formed through years of classical training and repeated contact with the instrument[22]. These dispositions are present in posture, touch, expectation and listening as much as in

[19] *Ivi*, pp. 62-64.
[20] *Ivi,* pp. 64-66.
[21] *Ibidem.*
[22] Niamh DELL, *Habitus, Resistance and the Production of Musical Meaning*, in «Tempo», vol. 78, n. 309, 2024, pp. 79-83.

consciously held aesthetic preferences.

The physical object intensifies the conflict because it remains familiar. Dell describes how her fingers curve over the keys and how the thumb rest settles into the groove formed through years of playing. Holding the oboe produces an urge to make familiar sounds, although that desire cannot be fulfilled within the piece[23]. Her description of this experience as 'an erasure, rather than simply an absence' is particularly useful. The oboe is present enough to invoke personal and musical histories while the reed-based actions through which those histories are normally sounded are unavailable[24].



[**Fig. 1** – Screengrabs from the 2022 video of *Spectral Breathing Apparatus*: close views of Niamh Dell's mouth at the reedless oboe and her fingers on the keywork. Performance: Niamh Dell; video: Angela Guyton; mix: James Bradbury]

Guyton's close framing extends the score's attention to the performer's body. The camera repeatedly approaches Dell's mouth and fingers, bringing into view the two physical sites that the notation separates into independent systems. Movements of the lips and jaw, activity around the empty reed well, and individual finger actions on the keywork occupy much of the visual field. Details that can be difficult to perceive in concert are therefore enlarged and sustained for inspection. This visual proximity

[23] Niamh DELL, *Exploring an Embodied Musical Habitus* cit., pp. 65-66.

[24] *Ibidem.*

parallels the work's amplification: the microphone brings normally marginal bodily and mechanical sounds forward, while the camera brings normally marginal bodily actions forward. The altered relationship between performer and instrument can consequently be watched as well as heard.

Dell extends this observation to her musical self-perception. She writes that the unvoiced oboe is 'not absent' and that its presence can provoke a kind of self-erasure because her identity as an oboist has been formed through those accumulated physical and sonic histories[25]. This does not mean that expertise disappears. Posture, tactile memory, breath control, coordination and sensitivity to small acoustic changes continue to shape the performance. The highly trained body remains active, although some of the outcomes through which that training is ordinarily recognised have been withdrawn.

The duration of the condition is important here. Reedlessness lasts for the full sixteen minutes. There is no neighbouring passage of conventional oboe sound against which the performer can understand these actions as temporary deviations. Dell instead develops local criteria through rehearsal, learning the behaviours of mouth shapes, breath pressures, unstable squeaks and transitions within this particular work[26]. She describes the total absence of the reed as reducing the impulse to 'correct' deviations back towards an established oboe ideal. The unfamiliarity can become productive because there is no immediate conventional sound to recover.

The word 'apparatus' in the title becomes suggestive in this context. The sounding situation extends across mouth, hands, breath, woodwind body, microphone, loudspeakers and electronic processing. The oboe remains visually and tactually central, but it no longer contains the whole instrumental system.

[25] *Ibidem*

[26] *Ivi*, pp. 61-62.

5. Amplifying the empty reed well

Amplification makes small components of this arrangement perceptible. The technical notes advise positioning the microphone close to the place where the mouthpiece would normally sit, rather than defaulting to the bell, because ingressive gestures, key sounds and mouth activity are prominent in the piece[27]. The microphone therefore attends closely to the junction between mouth and the now reedless instrument. Breath and oral sounds may be captured directly, while the bore continues to resonate with and filter those sounds when they are directed through or across it.

The live electronics are realised in Pure Data and include delay, pitch shifting, feedback, reverberation, ring modulation, phase shifting and spatial placement, alongside fixed media and a cue system. The score's proportional measures are coordinated with changes in processing, while the performance interface displays the current measure, elapsed time and measure duration. This allows precisely timed gestures to meet electronic events without requiring conventional metrical notation[28]. In performance, hisses, whistles and squeaks can be transformed into reverberant sonorities and surrounded by arcing gestures, clicks, glitches and fixed-media sounds. Dell describes this expansion from the performer's position, hearing small reedless sounds placed inside electronic environments whose scale exceeds their acoustic source[29]. The electronics enlarge and contextualise materials whose acoustic scale can otherwise be very small. They also allow the bodily source and its processed continuation to occupy different perceptual scales without requiring the reed to return as a stable instrumental centre.

[27] Stephen DE FILIPPO, *Spectral Breathing Apparatus* cit., electronics setup and technical requirements.

[28] *Ibidem.*

[29] Niamh DELL, *Exploring an Embodied Musical Habitus* cit., pp. 59-60.

6. Instrumental identity after subtraction

The score's open instrumentation follows from this arrangement. Although *Spectral Breathing Apparatus* was developed on oboe, the published performance notes describe it more broadly as a work for a 'six-holed woodwind instrument' without mouthpiece[30]. In the original oboe realisation, this means removing the double reed; the more general wording allows the same six-position fingering tablature and mouth/finger relationships to be adapted to related keyed woodwinds. It should not be read as an organological claim that these instruments literally share six exposed holes. The practical concern is the transfer of a six-position tablature and a set of bodily relationships rather than the preservation of written pitch.

I have described this aspect of the score as open-instrumentality: notation organised around bodily actions and instrumental mechanisms that can, in principle, be re-embodied on related instruments. In this article, however, the term remains secondary to the oboe realisation through which the work was developed and is analysed here.

Dell's terms 'unvoicing' and 'erasure' capture the central tension: the familiar instrument remains present while its usual sounding mechanism is withheld. Across sixteen minutes, posture, touch and expectation continue to be organised by the oboe even as mouth, fingers, bore, amplification and electronics assume altered roles.

The work has also circulated as a video artwork in gallery, museum and festival contexts. In those settings, the filmed encounter between Dell and the altered instrument becomes the work's primary mode of presentation, extending the close visual attention to bodily and mechanical action beyond the live performance.[31]

[30] Stephen DE FILIPPO, *Spectral Breathing Apparatus* cit., performance notes.

[31] See the documented presentation history on the author's *Spectral Breathing Apparatus* project page, including video presentations at the Carpenter Center for the Visual Arts, Harvard University; the

The intervention is materially small, but its consequences accumulate because the reed does not return. *Spectral Breathing Apparatus* leaves the instrument recognisable while exposing how strongly its identity depends on relations among object, body, learned technique, sounding expectation and technological mediation.

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Martin E. Segal Theatre Center, CUNY; and the Performing Media Festival at the South Bend Museum of Art.

Christopher REDGATE, *Re-inventing the Oboe*, in «Contemporary Music Review», vol. 26, n. 2, 2007, pp. 179-188.