

Finding Art and the Art of Finding

O que vos nunca cuidei a dizer

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ABSTRACT

The article discusses the making of *O que vos nunca cuidei a dizer*, a gallery work for interactive garment, transducer-based interface and live electronics. A technical description of the work is framed by an account of the creative process, with reference to media archaeological methodology and a discussion of the role of composed instruments in the new paradigms of artistic research.

On 2 July 1990, American scholar Harvey L. Sharrer found a fourteenth-century parchment fragment in Lisbon containing musical notation for seven love songs by Dom Dinis, king of Portugal (reigned 1279–1325). The manuscript, the only music we have by the “Poet King” and only the second known example of Galician-Portuguese troubadour notation, had been sewn as a book cover to notarial documents dated from 1571 [1]. Since its discovery, the Pergaminho Sharrer has been the object of linguistic, literary and musicological studies [2]. As a result, its cantigas have been sung again after a span of centuries. The history of this manuscript—how it came to be the way it is—is remarkable not only because of such a series of fortuitous and unexpected events but also because it highlights both its material and semiotic agency over time. It is a story about animal skin turned media, turned envelope, archive and song.

Joining in the exegesis of this artifact is *O que vos nunca cuidei a dizer* (2019), a gallery work for interactive garment, transducer-based interface and live electronics. In this article, we give account of its creative development and technical challenges: In the section titled “Hide and Seek,” we discuss

our approach to the source material with reference to media-archaeological methods and how this translated into a series of original recordings and audio interventions; in “Touchstone,” we detail the design of an original musical interface and discuss its role in the distinctive performer-interface interactions we envisioned for the piece; in “Interactive Garment,” we provide a description of the performer’s garment and function; in “Instrumental Cartography and Score Design,” we explain the reasons that led us to opt for a graphic video score as a notation paradigm; finally, in “Discussion,” we offer a brief reflection on the technical and conceptual challenges surrounding the project and discuss the themes that emerged as significant.

HIDE AND SEEK

Early on in the creative process, we made the decision to look at the Pergaminho not as a decayed and incomplete score but as the current form of a piece of media whose condition is tied to its past uses and potentialities: to be performed, to serve as a cover, to be an archive of troubadour songs and other cultural indices. This is in line with Wolfgang Ernst’s description of the idea of media archaeology as “both a method and an aesthetics of practicing media criticism, a kind of epistemological reverse engineering, and an awareness of moments when media themselves, not exclusively humans anymore, become active ‘archeologists’ of knowledge” [3]. In *O que vos nunca cuidei a dizer*, Ernst’s process of reverse engineering would end up translating into a performance—on and off the stage—of the very processes of discovery [4].

Such “performance” was paramount to the creative process. In it, Ernst’s methodological emphasis on mediatic noise—anything that takes part in the media but “interferes” with its message [5]—was particularly useful to navigate the material conditions and the cultural distance between us artists and the interacting media [6]. In collaboration with performer and monodrama specialist Mauricio Carrasco, we recorded one of the seven cantigas contained in the manuscript [7]. In carrying out deep reading exercises of the musical text, we found the most fruitful material to be the

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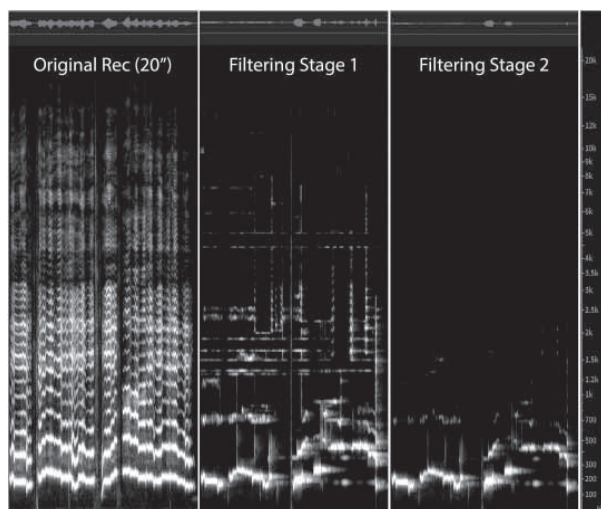


Fig. 1. “Hide and seek”: progressive erosion of original recordings. (© André Rabello-Mestre)

“noisiest”: the gaps, the opaque, the nondiscursive. Despite roots in the score, these vocal recordings not so much meet the historical past—or even the data, in Ernst’s sense [8]—but confabulate an oddly futuristic past: in regard to technology, expression, style and, most significantly, the lost sound of the Galician-Portuguese language.

Carrasco’s recordings constituted the primary source material for *O que vos nunca cuidei a dizer*. Its transformation during the compositional stage enacted a reversal of the logic of discovery: In a series of edits and heavy filtering interventions, the musical text was transfigured to the point where all that was left was a series of audio artifacts—a kind of sediment containing a formal sense of pace, of style and a vocal quality. This process—of performing and effectively concealing the song (Fig. 1)—served us not only to reconfigure the central attributes of Pergaminho Sharrer but would later allow us to stage an “aesthetic remediation” in concert.

TOUCHSTONE

The creative process of *O que vos nunca cuidei a dizer* was intimately linked to designing both an interactive garment and a transducer-based interface we called Touchstone. Work on the garment-interface involved a collaboration between composer André Mestre, designer Claudia Núñez-Pacheco and Carrasco, who would later premiere the piece at the 5th Bendigo International Festival of Exploratory Music (BIFEM) in Australia (Fig. 2). The interface itself consisted primarily of a vibrating wooden surface mounted with a bass shaker. The surface was designed to amplify acoustic signals upon contact with mechanical exciters. The interactive garment, beyond its dramatic and immersive role, was functionally connected with the instrument as it equipped the performer with two 58-mm transducers in the palm of his hands. Thus, the mode of interaction between the performer and the Touchstone interface was radiation and distortion of acoustic signals through touch. Completing the sound system were two hidden Genelec 8010A speakers and a subwoofer (Fig. 3).

Initial research into the interface considered a series of different acoustic signals, designs and materials. Ultimately, we preferred plywood over acrylic due to its greater radiation capability and relative weight; we found metal to be either too heavy or too malleable. We settled on an elongated trapezoid design, folded, resting with both ends on the ground (Fig. 3). Its size and position in relationship to the performer made the interface visually reminiscent of a cello or a theorbo. We added two scalloped bridges to the instrument’s body to expand the ways in which it could be touched, since partial or oblique contact between the exciters and the instrument was found to produce highly complex sonic results. Simple, quasi-sinusoidal signals were found to be more successfully irradiated by the instrument, with more complex sounds suffering significant loss of resolution.



Fig. 2. Mauricio Carrasco performing *O que vos nunca cuidei a dizer*. [Visual documentation captured by Matthew McGuigan from Hospital Hill and provided courtesy of the 2019 Bendigo International Festival of Exploratory Music, www.bifem.com.au.]

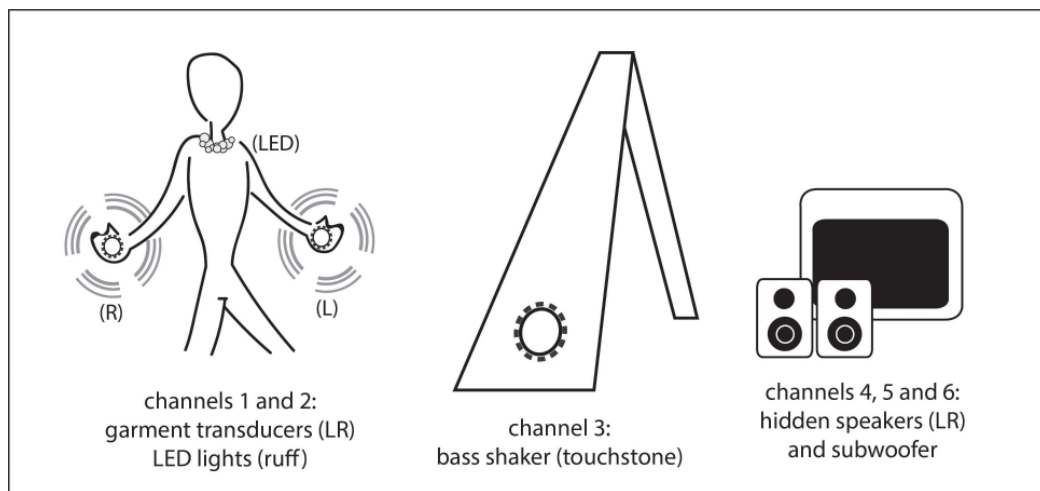


Fig. 3. Technical setup and sound sources for the work. (© André Rabello-Mestre)

Table 1 indicates how sound sources were ultimately paired with acoustic signals.

TABLE 1. Sound sources in *O que vos nunca cuidei a dizer*.

Sound Source	Location	Acoustic Signals from the Computer
Mechanical exciters, pair	Garment	Simple sound waves, filtered recordings (fixed)
Bass shaker	Touchstone	Simple sound waves (produced live in Max-MSP)
Small speakers, pair	Hidden	Filtered recordings (fixed)
Subwoofer	Hidden	Filtered recordings (fixed), sound waves (live)

Taken as a whole with the garment and computer program, Touchstone could be considered part of a creative trend of “composed instruments” in contemporary concert music [9]. Critical features of such instruments are their inextricable relationship to a musical work and an underground computational dimension, the latter often responsible for indirect or “non-obvious” connections between performative action and sonic response [10]. It is only recently that technical frameworks with which to evaluate such instruments have been proposed, most notably by Fabio Morreale et al. [11]. Using their framework’s guidelines to evaluate interaction constraints, Touchstone exhibits: (1) a low-medium level of *control*, with the possibility of shaping a musical event’s timbre and rhythm; (2) a high level of *input*, with the interface responsive to “ergotic” gesture; (3) the presence of *auditory* and *tactile feedback*; (4) medium *operational freedom*, with the performer being able to transform but not generate musical events; and (5) a high level of *embodied facilitation*, with agency dispersed between computer, interface and garment, even if compositional constraints apply.

INTERACTIVE GARMENT

Work on the performer’s garment was done in parallel to the interface’s design. This allowed us to address technical needs and aesthetic concerns simultaneously. The garment was composed of an initial layer of black fabric and black hakama-style pants. The performer wore over his torso a

modular design of self-sustaining pieces built on stiff fabric (Fig. 4). The garment also included a copper headpiece and an organza ruff containing reactive LED lights. Signal amplitude from the mechanical exciters was mapped onto the lights, providing the audience with visual feedback cues. Completing the garment was a set of gloves equipped with two mechanical exciters. This technological augmentation—whereby the performer would literally wear the mechanical production of sounds—made the garment co-responsible for musical expression, with the interface serving as an extension of this process. Another significant concern regarding the garment’s composition was how to produce thematic coherence between the work’s conceptual and visual motifs. Here,



Fig. 4. Mauricio Carrasco wearing the interactive garment in rehearsal. (© Claudia Núñez-Pacheco)

the dress played with elements suggested by the cantiga and echoed the futuristic and geometric design of the interface.

INSTRUMENTAL CARTOGRAPHY AND SCORE DESIGN

New possibilities of sound production and performative interaction are often the goal, or at least the by-product, of composed instruments [12]. In creating Touchstone, a significant objective was to use recordings—our material evidence of song—while preserving the familiar sense and the intimacy of instrument-performer interaction. Once the sound world had been defined, along with the performer's role as a mediator between computer, mechanical exciters and sound-board, we began to map out the sonic and choreographic possibilities afforded by the instrument's design. Performative parameters such as the Cartesian position of the hand, its trajectory and the degree of pressure applied to the transducers were found to affect musical parameters such as dynamics, timbre and timing. The choreographic nature of these actions, together with the need for synchronous coordination between the electronic track and the performer, made us opt for a graphic video score as a paradigm of notation. This approach gave the interpreter extremely precise, continuous instructions related to parameters such as acoustic envelope, timbre, timing and hand movement (Fig. 5). It was also successful in minimizing the learning curve inherent to playing new interfaces [13], while circumventing challenges to performer and audience immersion such as click tracks and page turning.

DISCUSSION

O que vos nunca cuidei a dizer faced significant conceptual and technical challenges. Its relationship to Pergaminho Sharrer was one that simultaneously aimed for material contiguity and ontological independence. Compositionally, the work probes into the past, as a number of compositions have done since the second half of the twentieth century: not so much as a stylistic gesture or authorial homage but as a refracted archaeology aimed, first and foremost, at recon-

figuring the delver [14]. The stakes of an already ambitious proposition were further raised by the challenge of designing an immersive gallery scene where even the performer's instrument had to be imagined.

In designing Touchstone, our greatest issue was to shorten the distance between performative input and instrumental output. Such distance is commonly understood as “instrumental transparency,” and the greater it is, the more inevitable musical relationships are perceived to be from the audience's perspective [15]. As Murray-Browne et al. have argued, high levels of transparency are critical to successfully emulate engaging instrumental drama onstage [16]. For an interface with limited operational freedom that relied on pre-recorded source material, this challenge was compounded. However, these shortcomings were ultimately balanced out by a relatively straightforward relationship between gesture and sound response, a concise sound world and a mechanical/tactile mode of sound production that could be physically intuited by the audience.

To we who took that near-ancient piece of parchment as a point of departure, the idea of archaeology remained a dynamic principle. It functioned as a methodology—a way of looking at and parsing our source materials—and it functioned as a metaphor—a kind of story we told ourselves that constantly informed the direction of the work. To provide a few examples, while the idea of regal authorship was not taken literally or stated anywhere, both the imagery and the technological augmentation facilitated by the garment did elevate the figure of the performer, lending it noble, religious and anachronistic overtones. The same happened with the soloistic and thematic characters of the original song: With most of the audience at arm's length of the performer, the staging carried a sense of intimacy that was heightened by the almost erotic dynamic between performer and interface. Finally, however, it was the attribute of incompleteness that came to define *O que vos nunca cuidei a dizer*—in how it translated into our own realization and recording of the original songs, how it was treated and presented, how the

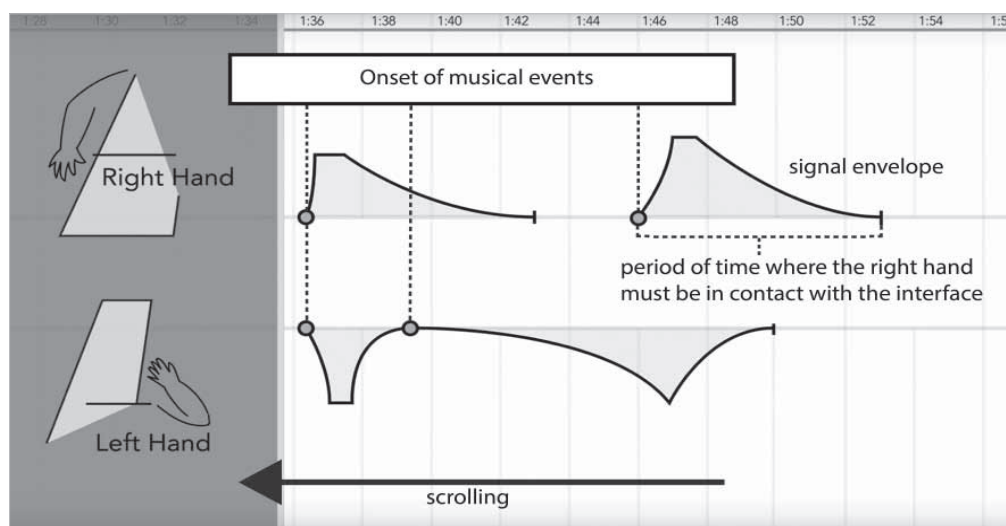


Fig. 5. Excerpt of the video score. Scrolling right to left are color-coded sound events taking place in the mechanical exciters in each hand. (© André Rabello-Mestre)

very process of radiating acoustic signals through plywood produced a tangible awareness of physicality and loss.

O que vos nunca cuidei a dizer looked for newness in old things and aimed to make recognizable things that had just seen the light of day. As collaborators, we often went back to an idea by Tim Ingold in our creative meetings. In his essay on the meaning of research he proposes that we need to approach research more like a hillwalker than a mountaineer: not moving from summit to summit, but finding continuous

astonishment in familiar paths—literally “re-searching” [17]. He says artists, much like hillwalkers, are exemplary in this mode of investigating. Indeed, Dom Dinis himself wrote using common troubadour motifs, exploring the theme and affects of courtly love as many would in the centuries that followed. Likewise, the discovery of his cantigas on that July day do not have to end there. That piece of parchment can be found again and again.

Acknowledgments

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References and Notes

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- 2 See the research done by Sharrer, Manuel Pedro Ferreira and Gladis Massini-Cagliari.
- 3 Wolfgang Ernst, “Media Archaeography: Method and Machine versus the History and Narrative of Media,” in Erkki Huhtamo and Jussi Parikka, eds., *Media Archaeology: Approaches, Applications, and Implications* (Berkeley, CA: University of California Press, 2011) pp. 239–255.
- 4 While it is relevant to note that there are significant differences in goals when such methodologies are applied to the field of artistic research and practice, they reinforce the disciplinary elasticity that, according to Huhtamo and Parikka, allows media archaeology to “roam across the landscape of the humanities and social sciences and occasionally to leap into the arts.” Huhtamo and Parikka [3] p. 9.
- 5 Wolfgang Ernst, “Between Real Time and Memory on Demand: Reflections on/of Television,” *The South Atlantic Quarterly* 101, No. 2 (2002) p. 628.
- 6 As Ernst puts it: “Media are not only objects but also subjects (‘authors’) of media archaeology.” See Huhtamo and Parikka [3] p. 241.
- 7 We recorded the homonymous song *O que vos nunca cuidei a dizer* (“What I never dared to tell you”). The main reference for this recording was the transcription made by Manuel Pedro Ferreira, available through the Littera Project. “Cantigas Medievais Galego-Portuguesas”: <https://cantigas.fcsh.unl.pt/versoesmusicais.asp?cdcant=530&vm1=128&vm2=232> (accessed 30 December 2019).
- 8 Ernst is suspicious of the hermeneutic gaze, preferring the data-driven approach of the archeologist-cum-engineer. “Hermeneutic empathy here clashes with pure data navigation: there is a world of difference between an *archaeology of knowledge* and historical imagination, which seeks to replace positive evidence by an act of reanimation.” Huhtamo and Parikka [3] p. 249.
- 9 Norbert Schnell and Marc Battier, “Introducing Composed Instruments, Technical and Musicological Implications,” *Proceedings of the 2002 Conference on New Instruments for Musical Expression* (NIME-02) (Dublin, Ireland, 24–26 May 2002) p. 1.
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- 11 Fabio Morreale, Antonella De Angeli and Sile O’Modhrain, “Musical Interface Design: An Experience-Oriented Framework,” *Proceedings of the 2014 International Conference on New Interfaces for Musical Expression* (NIME-14) (London, U.K., 3 July 2014) pp. 469–470.
- 12 William Philip Vine, “Composing the Instrument: An Alternative Approach to Musical Relationships between Composer, Instrument,

Performer and Audience,” PhD diss., University of East Anglia, 2014, ProQuest.

- 13 These challenges are discussed in detail in Tim Murray-Browne et al., “The Medium Is the Message: Composing Instruments and Performing Mappings,” *Proceedings of the 2011 International Conference on New Interfaces for Musical Expression* (NIME-2011) (Oslo, Norway, 30 May–1 June 2011).
- 14 One needs to look no further than Helmut Lachenmann’s *Accanto* or Salvatore Sciarrino’s *Allegoria della Notte* for works whose relationship to their “originals” defy traditional ontological boundaries. When Iyad Mohammad notes that Mozart’s clarinet concerto “continuously, but quasi-incognito, takes part in the structural formation of the music of *Accanto*,” he could have been describing *O que vos nunca cuidei a dizer* and its homonymous counterpart. Iyad Mohammad, “What Has Lachenmann Done with My Mozart?! A Note on Whatever Is Recorded on the Tape in *Accanto*,” *Contemporary Music Review* 23, No. 3–4 (2004) p. 146.
- 15 Tod Machover, “Instruments, Interactivity, and Inevitability,” *Proceedings of the 2002 Conference on New Instruments for Musical Expression* (NIME-02) (Dublin, Ireland, 24–26 May 2002).
- 16 Murray-Browne et al. [13].
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