

## Review of Contemporary Sound Installation Practices in Québec

Guillaume Boutard<sup>1,6</sup>, Catherine Guastavino<sup>2,3,6</sup>, Nicolas Bernier<sup>3,6,7</sup>, Philippe-Aubert Gauthier<sup>4,6</sup>, Valérian Fraisse<sup>3,6,8</sup>, Nicola Giannini<sup>3,6</sup>, Julien Champagne<sup>1</sup>

1 École de bibliothéconomie et des sciences de l'information, Université de Montréal.

2 School of Information Studies, McGill University.

3 Faculté de musique, Université de Montréal.

4 École des arts visuels et médiatiques, Université du Québec à Montréal.

5 Schulich School of Music, McGill University.

6 Center for Interdisciplinary Research in Music Media and Technology (CIRMMT).

7 Hexagram, Interdisciplinary Research-Creation Network.

8 STMS UMR 9912 (CNRS/IRCAM/Sorbonne Université).

**Abstract:** Continuing a trend of publications investigating sound art within a specific geographical context, this paper proposes an original view of the sound installation practice in Québec. This study is part of a research project aiming at building new theoretical and practical tools for the documentation of such artworks. In this paper we present the outcomes of the first phase and its connection with the bigger picture of the project, which is the questioning of the relevance of spatial audio recordings with six degrees of freedom (6DoF) for mediating the capture of knowledge relating to the sensory experience of a work. During the first phase, we developed a conceptual descriptive framework based on a mixed-methods approach, top-down and bottom-up, consisting in a systematic review of literature paralleled with a categorization of contemporary sound art production in Québec based on publicly available documentation. This process led to a formal and quantitative depiction of the Québec scene, which aims to guide both the selection of case studies for the next phases but also to be part of the conceptual tools for investigating the sensory experience of these works. This quantitative depiction of the scene will thus foster a qualitative investigation of the sensory experience of sound art installations and the knowledge that may be lost in standard written documentation practice with an original methodological framework.

**Keywords:** sound installation, taxonomy, Québec, documentation

# Introduction

Sound installation is an important paradigm within sound art, a broad category with a complex origin.<sup>1</sup> In this paper we rely on the definition proposed by Ouzounian:

*[ . . . ] as spatially-organized sound works, and, by extension, as sound works that privilege concepts and experiences of space and place. [ . . . ] sound installations may be site-specific or not (they may even be mobile, moving from site to site); they may include performance, recording, or broadcasting elements; they may be installed across multiple spaces and times (real, virtual, and imagined); they may be installed in galleries, museums, electronic networks, and in myriad non-traditional spaces (parks, elevators, subways, bodies, and so on).<sup>2</sup>*

Some of these enumerated characteristics of sound installations will be emphasized during our discussion. While notoriously discussed by numerous authors,<sup>3</sup> sound installations are less frequently analyzed within a precise geographical context. More recent texts investigate geographically situated productions in sound art, such as Nakagawa and Kaneko<sup>4</sup> in Japan and Migone<sup>5</sup> in Canada.<sup>6</sup>

The province of Québec has a rich tradition in the fields of electroacoustic music and technological art, combined with new extended practices that transcend domain boundaries—expressed notably in the term *postacousmatic* coined by Adkins, Scott, and Tremblay<sup>7</sup> and Migone’s definition of “sound art in the expanded field.”<sup>8</sup> We could make ours the statement (parenthesis included) of artist and writer Christof Migone: “There is a notable concentration of sound art activities in the province of Québec (and Montreal especially) that is reflected throughout this text: it is due to comparatively greater funding support by government agencies, but only in part—the reasons for this magnet-effect are manifold (and thus beyond the scope of this text).”<sup>9</sup>

Curator and author Nicole Gingras was among the first to address the practices of sound in art specifically within the province of Québec. In 2003, she stated that “after extensive document searches and numerous conversations, it became necessary to identify the many different ways in which sound has been incorporated into the visual arts—as presented in places as different from one another as galleries, museums and public spaces.”<sup>10</sup> Gingras’s publication was the outcome of a residency at the Montréal art center Artexite in 2002, whose goal was, notably, a research and analysis of sound components in visual and media arts in Canada. Gingras circumscribed the period of her research “from 1961 (the year of the *Semaine internationale de la musique actuelle*) through to 1992 (the year of the *7e Printemps électroacoustique*) and 2003.”<sup>11</sup> Gál reminds us that “it has only been in the last one-and-a-half decades, since the early 2000s, that art-related sound practices have emerged from relative obscurity into mainstream art discourse.”<sup>12</sup> Since Gingras’s project, in the early 2000s, the analytical as well as the documentational theorization in relation to sound art practice has considerably widened, revealing also inherent presentation and re-presentation challenges. In a similar vein to Gingras, we propose a review of sound art practices in the province of Québec, including also works not produced directly in Québec but closely related by the provenance of the artists. Unlike Gingras’s process, our review is informed by the building of a conceptual descriptive framework. This approach parallels the development of documentation frameworks, from the classic Variable media questionnaire,<sup>13</sup> for new media arts, to the more contemporary framework for documenting sound in time-based media installation art proposed by Brost.<sup>14</sup>

Our goal is thus not to produce a comparative study of the Québec scene that would position itself within the larger domain of sound installation practices but rather to bring a methodological focus on this scene, leading to the development of a descriptive framework that portrays this scene in a formal way to inform subsequent studies. The framework was developed by Fraise, Giannini, Guastavino, and Boutard<sup>15</sup> in the course of the Sound Art Documentation: Spatial Audio and Significant Knowledge (SAD-SASK) project, where the methodological developments are reported in detail. In

the present paper, we report on the general outcome of our study of the contemporary production in Québec and discuss the use of the framework to investigate empirically the sensory experience of sound art installations.

## The Documentation of Sound Art

According to Bressan and Canazza, who discuss interactive sound art preservation: “Installation art flourished in the XX century and its impact on the contemporary artistic production today is acknowledged worldwide. However installations are threatened by a life expectancy that is significantly shorter than that of other cultural materials, including audio-visual media.”<sup>16</sup> Still, the documentation of sound art has received scant research attention, with the exception of a handful of studies focusing on the historical, sociological, and technical perspectives.

Bressan and Canazza developed a broad conceptualization of the preservation of multimedia installation art stemming from their expertise in audio preservation with a specific focus on intrinsic (between elements) and extrinsic (between the installation and the visitor) interactions.<sup>17</sup> Their conceptualization does not lead to a specific documentation framework. Lacey focuses specifically on urban sound art installations with an inductive approach consisting of a small-scale review process of ten installations and subsequent interviews with stakeholders (artists, architects, and curators) of each work, leading to the specification of a list of emerging properties used to characterize these installations.<sup>18</sup> Nakagawa and Kaneko, in their documentation of sound art in Japan, propose a historical review of practice in this specific geographical context during the late 1980s to early '90s, taking into account the institutional context of production.<sup>19</sup> No analysis framework emerges from this review.

Besides generalizing frameworks (up to a certain extent), the literature also brings to light documentation practices relating to specific works. Stokowy discusses the documentation (or lack thereof) of Bill Fontana’s 1984 work *Distant Trains*, replacing it within its creative process and the career of the artist.<sup>20</sup>

Vasquez, in the course of a few case studies, discusses the aesthetic experience of sound art installation—in relation to what Bressan and Canazza have named “extrinsic interactions”—and the relevance of video documentation as an extension of the work.<sup>21</sup> Vasquez explicitly discusses “its relevance, influence on the piece, and impact on the audience,” without proposing guidelines for its production.

Brost, on the other hand, brings a typical conservation perspective on sound art documentation: “Documentation is a primary conservation strategy for time-based media artworks. This is due to the particular nature of these works, which are inherently transitory. Unlike artworks in traditional media, time-based media works only exist when they are installed.”<sup>22</sup> Brost developed an extensive documentation framework for sound art, building on Phillips’s identity and iteration reports in the broader context of time-based media works,<sup>23</sup> and adapting it to sound art. The identity part thus relates to the sonic identity, comprising a description of the sonic environment, the sonic parameters (consisting of several categories on two levels of abstraction), the media, and the sound system. The second part of the framework moves in the direction of the experience of the work, targeting notably the acoustic environment, the differences between iteration of the work (in direct continuation of Phillips’s work and in line with discussion about the evolutive nature of time-based media arts and its documentation),<sup>24</sup> and the sound documentation, including subjective listener experiences, but without a specific conceptual frame for its explicitation.

# The Sensory Experience of Sound Art

For Vasquez, “speaking specifically of sound art, the academic literature is much scarcer, and close to non-existent when it comes to considering the aesthetic implications of representing the many dimensions of a sound art work through documentation.”<sup>25</sup> Vasquez, in this text, reacts to the predominance of technical documentation. Converging with this statement, Stokowy considers that “witnessing a sound installation in person offers an opportunity to experience the qualities and elements of a work first hand and in full, multisensory effect. A thorough documentation of an exhibition and the work that goes into it is at the essence of preserving important information for future generations.”<sup>26</sup>

Dubois et al. define the sensory experience as “the relations that humans are able to establish with the physical world through their senses.”<sup>27</sup> The sensory experience of sound art has been underexplored and is only discussed in a few studies in relation to documentation. Eppley, discussing outdoor reinstallation and impact of a neighborhood’s modifications for Max Neuhaus’s famous *Times Square* (1977), argues: “one might assess how the new seating arrangement affects acoustic perception, or if its tones need to be ‘retuned’ to a new material density (requiring the conservation of Neuhaus’s digital materials and construction of a new AIFF file).”<sup>28</sup> As Cameron and Rogalsky put it: “In the realm of sound art, geography and the aural have obvious connections. Sound fills spaces and our experience of a sound depends to a large degree on where we listen to it.”<sup>29</sup> There is a need for the elaboration of a framework to record and analyze the sensory experience of sound art installations in relation to documentation practice, a framework that is on both a conceptual and a technological level, and is grounded in multiple expertise relevant to the practice.

The present work was conducted as part of SAD-SASK, a research project aiming at evaluating the use of spatial audio, specifically six degrees of freedom (6DoF) recordings, for the documentation of sound art installations. 6DoF in virtual reality systems refers to the ability to move in relation to six degrees; i.e., three rotational (roll, pitch, and yaw) plus three transitional (up-down, left-right, and forward-back) degrees of freedom.<sup>30</sup> The project comprises three phases. The first phase presented in this paper consists in developing a conceptual framework for the selection of case studies as well as the construction of interviewing instruments. The second phase consists in recording the selected case studies using 6DoF audio technology. The third phase consists in using these recordings to gather and analyze the sensory experience from experts in multiple domains—audio engineering; sound art creation; conservation and curation—with situated interviews during a virtual rendering of the case studies in a controlled environment.

As mentioned previously, the documentation of sound art is not a new question, but the current technological context brings a new perspective to it. Gingras did point out this weakness during her residency at Artexte: “Although exhibitions including works with a sound component, or those accompanied by soundtracks composed by musicians, were documented from the 1970s on, few publications have dealt with this dimension of the work in any great depth.”<sup>31</sup> She distinguished, notably, between “documenting devices” and “disseminating devices.” (Gingras uses the term *devices* to represent the modes of manifestation of sound that she discovered in Artexte’s archives during her residency. Documentation devices may include a CD supplementing a catalog, while dissemination devices may include a radio broadcast.) Both types of “devices” have been the subject of new practices of virtual re-presentation of sound artworks in a context of either dissemination<sup>32</sup> or documentation.<sup>33</sup> Our perspective is primarily informed by the investigation of documentation devices. According to artist and writer Christof Migone: “Exhibiting sound art poses challenges to the white cube: sound epitomizes leakage, sound confirms the porosity of space. Even prior to an intentional sound entering the equation, every space has its own soundtrack, its room tone. Every space is sonorous, every space

has a breath. Here we shall weigh the propensity of sound to displace, multiply, heterogenize the topos, place, site.”<sup>34</sup> These challenges transpose directly to the perspective of documenting sound art works.

SAD-SASK’s goal is to investigate the documentation means to capture the sensory experience of such works and the significance of this experience for the understanding of the challenges of its presentation and re-presentation. The framework that we built is not a direct analysis of the sensory experience of installation artworks per se—being constructed on available documentation rather than experience—but a mediation to capture this sensory experience, which in our project will occur in a subsequent phase during (virtually) situated interviews. It is not a capture of the artists’ intent—which would require specific investigations of creative and installation processes, including all stakeholders, and thus a smaller sample to investigate and a different methodological approach—but an analysis of the sound-related attributes relating to the sensory experience of a visitor, as defined by Dubois et al.

## Methodology

In this paper, we present the outcome of the first phase of SAD-SASK, namely the investigation of the Québec scene aimed at the selection of case studies. To support the selection process, a descriptive framework of the contemporary landscape of sound art practices in Québec was developed during the project.<sup>35</sup> Unlike Gingras, this is not a historical perspective, but rather a snapshot of current practices. It also does not claim to be exhaustive but builds upon concepts stemming from qualitative research sampling methods, as discussed below.

Methodologically speaking, it is worth mentioning that, first, our approach is directed primarily toward the documentation rather than the analysis of the works. This position thus diverges from initiatives such as the framework presented by Landy for the study of sound-based artworks, in relation to the ElectroAcoustic Resource Site (EARS) and in strong relationship with electroacoustic music,<sup>36</sup> or Maes and Leman’s thirteen-criteria proposition for a sound art definition.<sup>37</sup> Second, as compared to Brost, the proposed framework is specifically oriented toward the sensory experience of the work as compared to the conservation perspective of her framework.

Brost considers that, “for time-based media works that foreground sound, conservators must be conversant with sound physics, acoustics, audio engineering and sound design so that they can have productive conversations with artists and sound professionals in order to create meaningful documentation of the significant aural properties of an artwork for the future.”<sup>38</sup> Because of our focus on the sensory experience, we do not include work production processes, which also comprise the differences between iterations (one presentation of the work) and identity (constructed over its different iterations), emphasized by Phillips’s framework<sup>39</sup> and built upon by Brost. We do not include detailed observation about media types that are typical long-term management conservation questions. Still our methodology, as described below, builds upon such propositions for defining criteria, when relevant to our goals.

Furthermore, the multi-expertise described by Brost, as well as by Lacey, is part of our methodology, especially in relation to the second phase of the project (i.e., during situated interviews, as mentioned previously).

Our methodological position for this phase of the project thus merges several elements present in previously discussed research: (a) The case study-based process of Gingras, Lacey, Nakagawa and Kaneko, and Vasquez. (b) The specific interest in the sensory experience of Vasquez and, to a certain extent, of Bressan and Canazza, and Brost. The formalization perspective of Landy, Lacey, and Brost. The geographical focus of Gingras, and Nakagawa and Kaneko.

Specifically, for the first phase of the project, the development of the framework is based on a combination of top-down (primarily deductive) and bottom-up (primarily inductive) processes, as a way to integrate theory and practice into our framework. The top-down part relates to a literature review about the conceptualization of sound art and its properties according to different domains of research. This literature review includes several references presented in the two previous sections, when relevant, as well as numerous others less directly related to the specific question of documentation.<sup>40</sup>

The bottom-up process consists in a continuous review of available textual and audiovisual documentation of sound art installation works with potential new properties emerging to question and complement the concepts from the top-down process. The bottom-up process builds upon methodological tools from the social sciences, specifically the notions of theoretical sampling and theoretical saturation from grounded theory.<sup>41</sup> Theoretical sampling is an iterative process, “whose purpose is to go to places, people, or events that will maximize opportunities to discover variations among concepts and to densify categories in terms of their properties and dimensions.”<sup>42</sup> In order to maximize opportunities, three coders were selected from different backgrounds: electroacoustic music composition, sound art time-based media art practice, and music and technology research. The coders selected and reviewed works according to the emerging categories of the taxonomy based on available written and audiovisual documentation. The codes were reviewed and discussed as a group by all coauthors with additional input from two international collaborators. In the process of including new works, still in the perspective of theoretical sampling, we privileged the variation in terms of artists rather than in terms of a wide range of works by a limited number of artists. In relation to our discussion about Brost’s framework, we did not request additional information from the artists, such as installation files. While this can be seen as a limitation, this process seems relevant in a perspective targeting specifically the sensory experience rather than the creative process. Furthermore, it allowed us to consider a larger and more varied set of properties and dimensions among works by conducting a broader review, and thus to tend toward theoretical saturation. Theoretical saturation is reached when no new data introduces variation, or as Strauss and Corbin pragmatically say, “saturation is more a matter of reaching the point in the research where collecting additional data seems counterproductive.”<sup>43</sup> While we do not claim to have reached full theoretical saturation, the analysis process yielded a broad range of categories to describe the selected works in relation to the sensory experience of a visitor, which could in the future potentially (within methodological limitations) be applied to larger data sets, either locally, historically, or geographically.

## Review of the Taxonomy

We will not present in detail here the construction of the taxonomy, because that is not in the scope of this paper.<sup>44</sup> Our goal is to discuss the full set of results, giving an original perspective on contemporary sound installation practices in Québec, and to contextualize these results in the scope of the research project SAD-SASK.

During the process of taxonomy building, 75 works have been analyzed and described according to the coding scheme developed during this first phase. (The full data set is available at <https://doi.org/10.5683/SP3/GAOZOE>.) These include works by both emerging artists (e.g., Estelle Schorpp) and well-established figures (e.g., Jean-Pierre Gauthier). The coding scheme emerged while the taxonomy was being developed and refined, through an iterative process, which lasted from October 2020 to February 2021. The taxonomy comprises four top-level categories: (1) sound sources, (2) sound design approaches, (3) visiting modalities, and (4) visual aspects.

Categories and subcategories are presented in the following tables. The taxonomy hierarchy is displayed in terms of darkness: the darker, the higher the level of abstraction, while leaves that contain coded elements are displayed in white. One installation is coded in several categories, sometimes in leaves pertaining to the same category, as they are not mutually exclusive. The tables show only the number of occurrences in each leaf and not the title of the works coded in it, which is provided in the full data set.

Sound sources are the physical means of sound generation: loudspeakers, custom-made electromagnetic devices, or mechanical elements emitting sound. In terms of representation, for example, in this category, 44 installations include loudspeaker elements while 34 include mechanical elements as sound sources (see Table 1). One installation may include several elements pertaining to multiple categories and thus entail occurrences (occ.) in each category. One representative example of loudspeaker use is Adam Basanta’s *A Room Listening for Itself* (2015). Not without recalling Alvin Lucier’s seminal 1969 piece *I Am Sitting in a Room*, Basanta’s piece operates on a feedback system where the sound of the architectural space is captured by microphones and fed to loudspeakers, creating a feedback loop counterpoint in the exhibition space. Another frequent sound generation technique is the use of mechanical components. Those elements will often be set in motion by way of electrical motors, sometimes amplified with microphones and loudspeakers—thus including the precedent technique. This use of mechanical element can be exemplified with the work of Anne-F, for instance, in *Matières en suspension* (2017), in which animated mechanisms are used to reveal the acoustic properties of different objects and surfaces. Table 1 shows a nice balance between the use of speakers and mechanical elements. The limited presence of natural elements brings up a bias in the review fostered by the focus on indoor sound art installation, a bias explicated also in the other categories.

Sound Sources	
Speakers	44
Electronic	25
Mechanical	40
Natural Elements	5

Table 1. Occurrences in sound sources. One installation can give rise to multiple occurrences.

The sound design approaches category represents a broad range of facets describing the means of production: the sound material (in terms of content rather than media, which would lead more toward a conservation-driven framework); the processes of sound production (ranging from sonification to generative processes); spatialization criteria, including the number of sources, their position, orientation, and directivity, the type of spatialization control; as well as the site specificity of the installation (see Table 2). Because of our focus on the auditory sensory experience, spatialization and its relation to site-specificity played an important role in our selection process. In terms of our review, most works comprise multiple sources (58 occ.); few use moving sources (5 occ.). In terms of directivity, we find approximately the same amount of works in non-directional (37 occ.) and directional (39 occ.) categories, but these are not mutually exclusive and both types may be included in one work. Because we focused on indoor sound installations (69 occ.), few of the selected works (4 occ.) are dependent on a specific acoustic environment. Still, spatialization criteria and the relation to the installation location are relevant and have been emphasized in the literature in various domains (related to the expertise of the participants of the last phase of the project). For example, Kelly states that “a continuing concern to curators of sound in contemporary art is the space of the gallery itself.”<sup>45</sup> According to Kendall and Ardila, “a full description of spatial content and its implications within an artistic context may be very complex.”<sup>46</sup> Rumsey, notably, specified immersion attributes, including different types of source envelopment (individual, ensemble, and environmental) as well as the notion

of presence (sense of being inside a scene).<sup>47</sup> These notions, as used in the electroacoustic music research community, consider also how creative processes may challenge perception. Kendall, for example, explains that “image dispersion and signal decorrelation are two ways in which sound artists can create spatial images with extraordinary width.”<sup>48</sup>

Sound Design Approaches				
Materials	Spatialization		Site-specific	
Pre-existing Materials	12	Number of Sources	Site's Acoustics Involvement	5
Abstract	59	One Sound Source	Non-disruptive	3
Referential	21	Two Sound Sources	Informational Masking	0
Not or almost not audible sounds	3	Multiple Sound Sources	Indoor	69
Local recordings	Sources Position Relative to the Visitor(s)		Outdoor	6
People	4	Frontal	Oppositional	3
Environment	7	Stereo	Integrated	3
<b>Process</b>	Azimuth (Horizontal Plane)			46
Feedback generated	4	Lower than Ear level		25
Environment Reactive	4	Higher than Ear level		20
Sonification	6	Central Position		17
Generative	8	Moving Sound Sources		5
Time	Orientation			
Real Time	56	Towards the same point		19
Deferred Time	18	Towards different points		41
	Directivity			
		Non-directional		37
		Directional		39
	Spatialization Control			
		Channel Based		13
		Algorithm based		8

Table 2. Occurrences in sound design approaches.

The 2003 installation *condemned\_bulbes*, by Artificiel (Alexandre Burton, Julien Roy and Jimmy Lakatos), builds upon light bulbs whose filaments are controlled electronically to create the sound. As such it is a peculiar example of the electronic subcategory in sound sources. But the artists also emphasize the tuning process of the installation, visually and sonically, to the space in order to maximize the architectural and sonorous quality of the room. The question of tuning converges with Brost’s category of acoustic environment.<sup>49</sup> It emphasizes the fact that in our framework, while not coded in the site’s acoustics involvement that relates to a specific relation between a work and a site, still, a sound art installation usually needs to be tuned to the exhibition space. The fact that our review comprises predominantly indoor (69 occ.) installations over outdoor (6 occ.) installations, and that we focus on the sensory experience and not the creative process, may exacerbate this minimization of the role of tuning. This specific point will be further discussed in relation to the following phases of the project. An example of an installation that bridges the gap between a specific site’s involvement and the tuning of a work is Marc A. Reinhardt’s *Truss* (2019), which anchors activated piano wires to the walls of the exhibition space, working as a transposition of the Alexandra bridge in Ottawa. In term of materials, our review presents us with a slight predominance of abstract sound (59 occ.)—fostering a more acousmatic experience—over referential sounds (21 occ.).

The visiting modalities comprise spatial elements such as the access type, the scale of the installation, listening preferences, and the type of interaction that the visitor is able to conduct with the work (see Table 3). Most works in our review have a 360-degree access (39 occ.). In relation to the human scale, 51 installations are at human scale, while 9 use a smaller scale (micro) and 26 a larger scale (macro), which translate directly to the categorization in listening distance. Most installations (53 occ.) have a dynamic listening spot. The complexity and variability of the type of space-visitor access modalities connects to our investigation of 6DoF as a means for documentation. The six dimensions—three rotational and three transitional—allows the capture of the auditory sensory experience of much of these works. During playback, each participant creates its own navigation through the virtual space, whether the installation is a small self-contained object that can be circled around or an installation that



surrounds the visitor around and above—for example, Catherine Béchard and Sabin Hudon’s *La resonance des corps* (2016), which is a site-specific sound art work installed in the bell tower of the Centre Hospitalier de l’Université de Montréal. This specific work is also an example of a larger scale (macro) installation.

Visiting Modalities			
Access		Interaction	
Inside	39	Interaction Type	
Not reachable	1	Embodied	10
Around		Visitor's Motion	2
90°	4	Non-contact triggering	5
180°	9	Visitor's Sounds	6
360°	39	Feedback Type	
Dimension		Visual	7
Scale		Haptics	3
Micro	9	Sonic	22
Human	51	Visitor's Input Degrees of Freedom	
Macro	25	Many	3
Listening		One	20
Near	12	Visitor's Output Degrees of Freedom	
In-between	61	Many	11
Far	2	One	11
Listening Spot		Musical Control	
Sweet spot	12	Process	19
Dynamic	53	Note-Level	1
Sound Pathway	8	Timbral	4

Table 3. Occurrences in visiting modalities.

Although some of the artworks in the review are closely connected to elements of performance, we have not taken this dimension directly into consideration for the analysis, as opposed to authors such as Vasquez, as they would bring the framework beyond our focus on the modalities of extrinsic interaction manifested in the elements present in this category (see Table 3). The artist Esther Venrooij mentions that, “as a sound artist presenting a sound sculpture or installation, I often receive invitations to perform. Performances always look good on an invitation or a poster for the opening or closing of an exhibition,”<sup>50</sup> but she also discusses how a piece may be “exhibited and innately performative” (building on the example of La Monte Young and Marian Zazeela’s *Dream House*). For the artist Raymond Gervais, “le mot installation est un terme que l’on associe souvent à celui de performance. L’installation serait en quelque sorte le pendant de la performance, sa contrepartie.”<sup>51</sup> In our review, for example, Philippe Lauzier’s *Pianotissage* (2018), a piano combined with the concept of a loom, is labeled as a sound installation by the artist, who states that the work also proposes a 30-minute performance to explore the installation in relation to human sensibility, echoing the interest of Bressan and Canazza for extrinsic interactions. A recording of a 2019 performance by Lauzier and Belinda Campbell in Québec was released in 2020 on the label Mikroclimat. This recording is a good example of an object that is both a documentation and a dissemination device. The interaction subcategory brings to light the inherent limitations of our methodology, as not all works could be effectively coded in its extensive framework of subcategories—with a strong relation to the literature (bottom-up process)—without a direct access to the work or experiential documentation (see the full data set).

Visual Aspects			
Intervention Visibility		Movement	
None	0	Static Elements	
Non-sonic Elements	41	Architecture	3
Sonic Elements	64	Sculpture	38
Luminosity		Dynamic Elements	
Dark	2	Audiovisual	14
Dim lights	25	Mechanical Choreography	29
Dymic	13		
Full Light	39		

Table 4. Occurrences in visual aspects.

The last main category refers to visual elements. This category is reduced to a minimal set of elements (see Table 4) that reflect our research interests and methodology. Gingras asked: “Can sound be visualized? To what extent can listening be documented? Does sound leave traces?”<sup>52</sup> This second question is certainly the closest to our research. The goal of the SAD-SASK project is to investigate 6DoF audio recordings for the documentation of sound art installations. The subsequent interviews will be conducted in an audio virtual environment without visual feedback. Maes and Leman warned us: “From the outset it seems rather straightforward that the acoustic component stands central in sound art. However, this criterion is not always that unambiguous because it can be difficult to determine whether the sonic or the visual aspects of the artwork are the essence of the work.”<sup>53</sup> The decision to exclude visual elements from the study, and its consequent limitations, will be discussed with the results of this second phase of the project, but it has an impact on the level of granularity and scope of this category in our framework. Visual elements in our taxonomy are thus limited to four subcategories—namely, the visibility of sound-producing elements (that is to say the elements described in the first category, sound design approaches), the luminosity (of the environment of presentation), the presence of static elements, and the presence of dynamic elements. Maes and Leman’s statement is connected with the quantitative data in Table 4, where no sound installation was coded in a no-visibility paradigm. Elements of luminosity, though, are quite widespread in terms of distribution from dim light to full light.

## Selection

The review reported in this paper provides an overview of practices and serves as the basis for the selection of case studies for further investigation in our research project. This selection process mirrored the top-down, bottom-up process of the taxonomy building. All coauthors reviewed all of the works using quantitative and qualitative criteria (a ranking and a comment) that reflect their evaluation of the work as a potential case study. Results were aggregated and compared to the taxonomy. From this, the potential case studies could be compared in terms of criteria in order to maximize the diversity while keeping in mind the feasibility of the recordings.

Out of a shortlist of fifteen works, we selected three: Estelle Schorpp’s *Écosystème(s)*; Jean-Pierre Gauthier’s *Générateur stochastique*; and Catherine Béchard and Sabin Hudon’s *La résonance des corps*. Unfortunately, access to *La résonance des corps* was made impossible in the sanitary context of 2021, and we had to discard this possibility. The continuing pandemic has made it very difficult to expand our selection, especially in relation to installation in dedicated indoor spaces. These case studies will not likely cover the variety of approaches conveyed by this taxonomy, but their selection aims at representing contrasting works along the different categories of the taxonomy that we deemed relevant for an exploratory research project. The works represent different scales of works but also presented in different contexts for their recording in this second phase of the project: in a controlled environment, a gallery, and (originally) a dedicated space that relates to the category site-specificity.

They cover different types of sound sources, different paradigms of orientation and directivity. The visiting modalities, beyond the scale, present us with several listening paradigms and various degrees of input and output. In terms of visual aspects, they are more similarly categorized, which reflects the minimalism of this category discussed previously. When we submitted this paper, we were starting the second phase of the project during summer 2021. The 6DoF recording of the first work was made in the controlled acoustic environment of the new Music Multimedia Room (MMR) at McGill University. The recording of the second work was made at gallery Ellephant in Montréal, where it was exhibited.

## Conclusion

The outcome of this first phase of the SAD-SASK project, presented in this paper and the associated data sheet, is a formalized review of practices that, despite not being exhaustive, proposes an open methodology for future extensions. Beyond the posited goal of the project to investigate the sensory experience of installation artworks from a documentation perspective, we believe that the part of our research project discussed in this paper brings an original approach to analyzing and discussing a specific art scene in between the creative process and its experience. Whether or not it is transferable to another scene is debatable, but the proposed top-down, bottom-up methodology is a tool that may be relevant for other studies in other contexts of practice.

We have discussed the limitations of our methodological approach—including the scarcity of material to be reviewed for the bottom-up process and the focus on the visitor’s perspective (aiming at the sensory experience) as compared to the creative process—but also its benefits in comparison to other conceptualizations of documentation for sound art—including the mixed methods approach, and the broad range of works taken into account. Some of the limitations could be easily addressed: The review process of sound installation artworks using the framework could be made more thorough both in terms of coding validity and in scope (including more artworks and potentially expanding its aesthetic and geographical reach, with methodological caution regarding generalization) by making the database a participatory process. A growing database such as this would be useful to both researchers and artists alike. Still, our conceptual framework is closely related to its counterpoint, which is the subsequent evaluation of 6DoF recordings for the documentation of the sensory experience of sound art installation.

While designed according to the specific goals of a research project on spatial audio documentation, and thus on “documentation devices,” it does not hinder thinking about “dissemination devices.” On the contrary, the first phases of the project tend to push us toward the idea of a continuity between documentation and dissemination, where presentation and re-presentation are discussed across multiple technological mediations.

On the relation between documentation and preservation, Bressan and Canazza have highlighted the potential loss of knowledge about the setting as the most serious factor in producing a short life expectancy for this kind of artwork. They state: “This type of loss characterises interactive multimedia installations. It is more common than it might be suspected: there might be technical sketches or compositional notes, but a thorough technical scheme of the system is almost always missing [ . . . ]. Besides, it is common practice to adapt minor aspects of the Installation on the spot, due to frequent unexpected restrictions on the exhibiting venue (and these adaptations are almost never documented).”<sup>54</sup> Following the first point, we advocate for a documentation methodology that takes into account the sensory experience of visitors. While Bressan and Canazza do discuss the experience of a work, they do not explicitly address the need and means of its documentation, a need emphasized, notably, by Lacey (2016) who calls for a study of user experience. This is the goal of the second part of

the project, where the formal categories of the taxonomy meet spatial audio recordings and the capture of significant knowledge.<sup>55</sup>

The second point of Bressan and Canazza’s statement leads, convergingly, to our previous short discussions about the tuning of sound art works to the space of exhibition. This important question for documentation is represented in Brost’s framework; she specifies: “Note any instructions provided by the artist on how to adjust or ‘tune’ the audio for the exhibition space. Both technical detail from a sound specialist and subjective descriptions of the desired effects are valuable.”<sup>56</sup> While discussed in several papers presented here, it was also emphasized by several artists contacted in the scope of the second phase. The methods that address these points specified by Brost are also the matter of the continuation of our project and similarly to Brost’s hint at a multi-expertise framework.

It is our postulate that Bressan and Canazza’s loss of knowledge involves a significant amount of tacit knowledge. The study of this tacit as well as explicit knowledge through the investigation of the sensory experience—mediated by spatial audio recordings and the proposed descriptive framework—will bring to light the qualitative aspects deemed significant by various stakeholders. This will benefit documentation methodologies, which leads back to the point where we started: the study of a specific scene from the available documents produced for its documentation and dissemination.

## Data

The full data set is available at <https://doi.org/10.5683/SP3/GAOZOE>.

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## Notes

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<sup>1</sup> See a discussion in Judy Dunaway, “The Forgotten 1979 MoMA Sound Art Exhibition,” *Resonance* 1, no. 1 (2020): 25–46.

<sup>2</sup> Gascia Ouzounian, “Sound Art and Spatial Practices: Situating Sound Installation Art since 1958” (PhD diss., UC San Diego, 2008), 33.

<sup>3</sup> E.g., Alan Licht, “Sound Art: Origins, Development and Ambiguities,” *Organised Sound* 14, no. 1 (2009): 3–10; Caleb Kelly, *Gallery Sound* (New York: Bloomsbury Academic, 2017).

<sup>4</sup> Katsushi Nakagawa and Tomotaro Kaneko, “A Documentation of Sound Art in Japan: Sound Garden (1987–1994) and the Sound Art Exhibitions of 1980s Japan,” *Leonardo Music Journal* 27 (2017): 82–86.

<sup>5</sup> Christof Migone, “Canadasonic,” in *Sound Art: Sound as a Medium of Art*, ed. Peter Weibel (Cambridge, MA: MIT Press, 2019), 688–99.

<sup>6</sup> As a matter of fact, several authors in the “Historical Cartography of Sound Art” section in Weibel, ed., *Sound Art*.

<sup>7</sup> Monty Adkins, Richard Scott, and Pierre Alexandre Tremblay, “Post-Acoustic Practice: Re-evaluating Schaeffer’s Heritage,” *Organised Sound* 21, no. 2 (2016): 106–16.

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- <sup>8</sup> Migone, “Canadasonic,” 689.
- <sup>9</sup> Migone, “Canadasonic,” 698.
- <sup>10</sup> Nicole Gingras, “Sommaire / Summary,” in *Le son dans l’art contemporain Canadien / Sound in Contemporary Canadian Art*, ed. Nicole Gingras (Montréal: Arttextes Editions, 2003), 15.
- <sup>11</sup> Gingras, “Sommaire,” 16.
- <sup>12</sup> Bernhard Gál, “Updating the History of Sound Art: Additions, Clarifications, More Questions,” *Leonardo Music Journal* 27 (2017): 78.
- <sup>13</sup> Jon Ippolito, “Accommodating the Unpredictable: The Variable Media Questionnaire,” in *Permanence Through Change: The Variable Media Approach*, ed. Alain Depocas, Jon Ippolito, and Caitlin Jones (New York: Solomon R. Guggenheim Foundation, 2003), 47–54.
- <sup>14</sup> Amy Brost, “A Documentation Framework for Sound in Time-Based Media Installation Art—Electronic Media Review,” *Electronic Media Review* 5 (2018).
- <sup>15</sup> Valérien Fraisse et al., “Experiencing Sound Installations: A Conceptual Framework,” *Organised Sound* (forthcoming).
- <sup>16</sup> Federica Bressan and Sergio Canazza, “The Challenge of Preserving Interactive Sound Art: A Multi-Level Approach,” *International Journal of Arts and Technology* 7, no. 4 (2014): 294.
- <sup>17</sup> Bressan and Canazza, “The Challenge of Preserving Interactive Sound Art,” 294.
- <sup>18</sup> Jordan Lacey, “Sonic Placemaking: Three Approaches and Ten Attributes for the Creation of Enduring Urban Sound Art Installations,” *Organised Sound* 21, no. 2 (2016): 147–59.
- <sup>19</sup> Nakagawa and Kaneko, “A Documentation of Sound Art in Japan,” 82–86.
- <sup>20</sup> Robert Stokowy, “Bill Fontana’s Distant Trains: A Documentation of an Acoustic Relocation,” *Organised Sound* 22, no. 1 (2017): 112–21.
- <sup>21</sup> Juan Carlos Vasquez, “Considerations on Sound Art Documentation: Theories and Case Studies,” in *Proceedings of the International Computer Music Conference (ICMC)* (New York: ICMA, 2019).
- <sup>22</sup> Brost, “A Documentation Framework for Sound in Time-Based Media Installation Art.”
- <sup>23</sup> Joanna Phillips, “Reporting Iterations: A Documentation Model for Time-Based Media Art,” *Revista de História da Arte* 5 (2015): 168–79.
- <sup>24</sup> Such as Pip Laurenson and Julia Noordegraaf, “Case Study: The Conservation of Media Art at Tate,” in *Preserving and Exhibiting Media Art: Challenges and Perspectives*, ed. Julia Noordegraaf, Cosetta G. Saba, Barbara Le Maître, and Vinzenz Hediger (Amsterdam: Amsterdam University Press, 2013), 282–303.
- <sup>25</sup> Vasquez, “Considerations on Sound Art Documentation,” 1.
- <sup>26</sup> Robert Stokowy, “Bill Fontana’s Distant Trains,” 112.
- <sup>27</sup> Danièle Dubois et al., *Sensory Experiences: Exploring Meaning and the Senses* (Amsterdam: John Benjamins Publishing Co., 2021), 23.
- <sup>28</sup> Charles Eppley, “Times Square: Strategies and Contingencies of Preserving Sonic Art,” *Leonardo Music Journal* 27 (2017): 21–26.
- <sup>29</sup> Laura Cameron and Matt Rogalsky, “Conserving Rainforest 4: Aural Geographies and Ephemerality,” *Social & Cultural Geography* 7, no. 6 (2006): 910.
- <sup>30</sup> See Eduardo Patricio et al., “Toward Six Degrees of Freedom Audio Recording and Playback Using Multiple Ambisonics Sound Fields,” in *Proceedings of the Audio Engineering Society Conference* (Dublin: AES, 2019).
- <sup>31</sup> Gingras, “Sommaire / Summary,” 45.

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<sup>32</sup> E.g., Seth Cluett and Chris Manzione, “Rainforest V (Variation 1) VR Experience,” 2020, <https://sketchfab.com/3d-models/rainforest-v-variation-1-vr-experience-043c5715cfc947668e688af65629e8ae> (accessed January 14, 2022).

<sup>33</sup> E.g., Jack McConchie, “Virtual Reality Tools as Spatial Documentation,” *Electronic Media Review* 5 (2018).

<sup>34</sup> Christof Migone, “Volume (of Confinement and Infinity): A History of Unsound Art,” in *Le son dans l’art contemporain Canadien / Sound in Contemporary Canadian Art*, ed. Nicole Gingras (Montréal: Artexes Editions, 2003), 81.

<sup>35</sup> For a detailed description of the methodology, see Fraisse et al., “Experiencing Sound Installations.”

<sup>36</sup> Leigh Landy, *Understanding the Art of Sound Organization* (Cambridge, MA: MIT Press, 2007).

<sup>37</sup> Laura Maes and Marc Leman, “Defining Sound Art,” in *The Routledge Companion to Sounding Art*, ed. Marcel Cobussen, Vincent Meelberg, and Barry Truax (New York: Routledge, 2016), 27–39.

<sup>38</sup> Brost, “A Documentation Framework for Sound in Time-Based Media Installation Art.”

<sup>39</sup> Phillips, “Reporting Iterations,” 168–79.

<sup>40</sup> For a detailed presentation of the literature in relation to the taxonomy, see Fraisse et al., “Experiencing Sound Installations.”

<sup>41</sup> Barney G. Glaser and Anselm L. Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Chicago: Aldine Publishing, 1967).

<sup>42</sup> Anselm L. Strauss and Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, 2nd ed. (Thousand Oaks, CA: Sage Publications, 1998), 201.

<sup>43</sup> Strauss and Corbin, *Basics of Qualitative Research*, 136.

<sup>44</sup> This construction is documented in a dedicated paper with precise description of the categories and their relation to the literature. See Fraisse et al., “Experiencing Sound Installations.”

<sup>45</sup> Caleb Kelly, *Sound, Documents of Contemporary Art* (Cambridge, MA: MIT Press, 2011), 17.

<sup>46</sup> Gary S. Kendall and Mauricio Ardila, “The Artistic Play of Spatial Organization: Spatial Attributes, Scene Analysis and Auditory Spatial Schemata,” in *Computer Music Modeling and Retrieval: Sense of Sounds*, ed. Richard Kronland-Martinet, Solvi Ystad, and Kristoffer Jensen, Lecture Notes in Computer Science (Berlin, Heidelberg: Springer, 2008), 125–38.

<sup>47</sup> Francis Rumsey, “Spatial Quality Evaluation for Reproduced Sound: Terminology, Meaning, and a Scene-Based Paradigm,” *Journal of the Audio Engineering Society* 50, no. 9 (2002): 651–66.

<sup>48</sup> Gary S. Kendall, “Spatial Perception and Cognition in Multichannel Audio for Electroacoustic Music,” *Organised Sound* 15, no. 3 (2010): 236.

<sup>49</sup> Brost, “A Documentation Framework for Sound in Time-Based Media Installation Art.”

<sup>50</sup> Esther Venrooij, *Sounding Things Out: A Journey Through Music and Sound Art* (Eindhoven: Onomatopée, 2020), 68.

<sup>51</sup> “The word installation is a term that is often associated with performance. The installation would be, in a way, the complement of the performance, its counterpart” (our translation). Raymond Gervais, “Big Bang et Postmodernité,” in *Le son dans l’art contemporain Canadien / Sound in Contemporary Canadian Art*, ed. Nicole Gingras (Montréal: Artexes Editions, 2003), 152.

<sup>52</sup> Gingras, “Sommaire / Summary,” 57.

<sup>53</sup> Maes and Leman, “Defining Sound Art,” 28.

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<sup>54</sup> Bressan and Canazza, “The Challenge of Preserving Interactive Sound Art,” 302.

<sup>55</sup> As defined by Guillaume Boutard and Catherine Guastavino, “Archiving Electroacoustic and Mixed Music: Significant Knowledge Involved in the Creative Process of Works with Spatialisation,” *Journal of Documentation* 68, no. 6 (2012): 749–71.

<sup>56</sup> Brost, “A Documentation Framework for Sound in Time-Based Media Installation Art.”