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*Una Casa de Sonidos:*

## Sonic Storytelling with Central American Refugee Minors

**This paper introduces *Una Casa de Sonidos*, a project that enables undocumented, unaccompanied youth in the Casa de Sueños program in Phoenix, Arizona to tell stories using the medium of sound. The paper discusses theoretical precedents for community based art projects that explore social issues and encourage public participation, as well as other conceptual and formal foundations within the arts and social sciences. It details the procedures involved in facilitating the workshops at Casa de Sueños, as well as the manner of public presentation of the work produced there. This discussion of presentation operates within the frame of “witnessing,” detailing how the public “stands in” for the absent youth, thereby completing the process that brings their work to life within the “house of sounds.”**

### 1. INTRODUCTION

*Una Casa de Sonidos* celebrates the richness of the medium of sound through sonic storytelling. A partnership with the Phoenix, Arizona based Tumbleweed Center for Youth Development program Casa de Sueños, this project brings unaccompanied youth in the custody of the Federal Office of Refugee Resettlement into contact with a variety of audio production techniques. The sounds resulting from these experiments populate an interactive sound installation that responds to the presence and movement of visitors. Through use of custom software and live video tracking, gallery visitors experience the sonic narratives of Casa de Sueños youth as an immersive, interactive audio environment where every movement is observed.<sup>1</sup> To realize this project, I worked with total of 18 youth, ages 12 to 17. They participated in 5 hours of workshop time a week over the course of 2 months covering a variety of topics related to sound design. These workshops featured hands-on activities including microphone fabrication, instrument design, sound effect creation, composition, and interaction using the Kinect© sensor.

Every year, thousands of unaccompanied minors attempt to enter the US without proper legal documentation. The Homeland Security Act of 2003 endowed responsibility for caring for these minors in federal custody to the Office of Refugee Resettlement. In 2011, the most recent fiscal year for which statistics are available, the ORR provided care for 6,855 youth, 81% of whom came from Guatemala, Honduras, or El Salvador (Resettlement n.d.). Though border detentions have declined overall in recent years, the number of undocumented, unaccompanied minors in federal custody has dramatically increased, with 6,300 apprehended in the first half of FY2012 alone (Fernandez 2012). The youth remain in custody for an average of 45 days, during which time the federal government reviews their refugee status. A variety of factors compel youth to migrate, including ethnic persecution, political instability in their home country, and extreme poverty. These intersect in unique ways for each youth. Some receive permanent refugee status, but most must return to their country of origin.

Casa de Sueños provides case management and reunification services to this unique population. While living at Casa de Sueños, youth have access to *pro bono* legal council, physical and mental health screenings, free clothing and personal hygiene items, schooling, recreational activities, and vocational training. As part of this vocational training program, I, along with other local artists and educators, have the opportunity to expose youth to art making practices and to teach them technical skills. Despite the resources available to youth while living in the house, their incarceration there imposes certain constraints: they cannot leave unsupervised, and all their activities are monitored.

The “house of sounds” metaphor arises from the contradiction between the benefits provided by Casa de Sueños and the freedoms curtailed there. A house, like the box used as the body of a homemade instrument, is a container, designed to hold and protect, but also to constrain and constrict. It has a resonance particular to its form. A house can represent security or restriction. This tension produces a tone within the space of Casa de Sueños. The creative process employed in *Una Casa de Sonidos* empowers youth, despite the limitations imposed by their incarceration, to tell stories using homemade, sound-making devices constructed during hands-on activities. In this way, youth have agency in guiding the content of their sonic explorations while also gaining valuable experience collaborating within a creative process. Ultimately, participants in *Una Casa de Sonidos* create a sound works they can truly take ownership of, constructing, from start to finish, their own “house of sounds.”

A significant challenge in realizing *Una Casa de Sonidos* arises in the attempt to capture and translate this tone for presentation within another box-like structure: the gallery. The use of an eight channel speaker spatialization intensifies this sense of constraint, hemming the audience into an approximately 4 by 4 square meter space. Since the presentation of the work must keep confidential the identities of the

youth, which precludes sharing their images and personal information, the sounds traveling through the speaker array assert their presence within the gallery. Using the presence of their own body to conjure the sounds created by the youth, the gallery visitor “stands in” for them, and becomes witness to the traces they have left behind.

## 2. BACKGROUND

### 3. 2.1 Prior Work

My art practice, shaped by years of community activism and volunteer work with independent media, seeks to increase awareness of social and environmental issues. I have approached this in ways ranging from oblique to didactic, using various tactics with varying degrees of success. My interactive installations *Water's Work* and *The Ptown Constellations* visualize human relationships with finite resources: water and Phosphorus. My recent performance work explores my identity as a gay man, how that impelled my own migration from the Atlanta suburbs to San Francisco at 18, and the many years I spent in the food and beverage service industry as a result. I strive to balance my interest in computer programming and use of emerging technologies with a desire to connect with real people in face to face situations, as well as to offset the negative environmental impact of the electronic media I employ. This quest for equilibrium has led to the cultivation of a more social practice that incorporates pedagogy and casts my role as facilitator rather than sole creator.

*Una Casa de Sonidos* grew from a series of workshops I conducted called *The Drifter's Guide to Urban Field Recording*. Originally developed in 2011 for the Next Action: Art + Technology group show<sup>ii</sup> in collaboration with the Learning Installations Research Group,<sup>iii</sup> South Mountain High School, Phoenix Country Day School, and Scottsdale Museum of Contemporary Art, *The Drifters Guide to Urban Field Recording* encourages participants to explore their built environment through a series of group listening and sound composition exercises. Influenced and informed by the history of sound art, spatial exploration, and community practice in the arts, these yield collaborative work that reflects upon the body in space and place, and identity in relation to community. Participants make compositions with media captured during their excursions, aided by custom software that I designed called *The Drifter*. Built with Max/MSP, it uses an algorithm inspired by chance-based composition techniques to create non-linear paths and incidental emergences through the collected material (Puckette and others 1990-2013).

*The Drifter's Guide to Urban Field Recording* combines the practice of the *dérive* as articulated by Guy Debord and the Situationist International with contemporary audio and video recording techniques (Debord 1958). In this way, it also references “soundwalks” conducted by Hildegard Westerkamp and other members of the World Soundscape Project (Westerkamp 1974). During workshops for the Next Action show, and at the Universidad Autónoma Metropolitana, I assisted participants in staging their own *dérives*. Using custom electronics and low cost digital recorders to capture their observations, participants experienced familiar places with a heightened level of awareness of detail. The resulting compositions evidenced their meditation upon the configuration of the built environment, and how this influences and codifies the values of the society that built it.

### 4. 2.2 Motivation

The design of the *Drifter's Guide* workshops stems from my interest in how the process of constructing place both informs and is informed by cultural and personal identities. Though *Una Casa de Sonidos* deals with similar themes, its approach to them necessarily differs. Casa de Sueños clients lack the freedom to “drift” around public space: staff monitor their activities closely, and they must avoid situations that pose a flight risk. Additionally, activities involving the youth may not risk revealing any identifying information. This precludes the use of any photography or video during the workshops, as well as the recording of spoken text. Nonetheless, these constraints upon the type and character of activities involved in realizing *Una Casa de Sonidos* inform its content and format, challenging the audience to reconcile with and reflect upon the implications of its limitations.

The piece functions as a witnessing to this phenomenon of children entering the country unaccompanied, though, in this context, the intended meaning of this term “witnessing” requires some explanation. John Durham Peters contends that “witnesses serve as the sense organs of the absent...a witness is the paradigm case of the *medium*: the means by which experience is supplied to others who lack the original” (Peters 2001: 709). This act of witnessing has the power to reify an event, and to implicate the witness in its occurrence. Going beyond simple observance or acknowledgement of phenomena, the witness marks it using their own embodied presence and action, bringing it into the realm of discourse.

The social tension generated by immigration-related legislation enacted in the state of Arizona beginning with the passage of SB 1070 in 2009 lends urgency to the witnessing of the migration of unaccompanied minors. Rather than contribute to the political discourse around undocumented immigration, this project elects instead to focus, as much as possible, on its human dimensions. The process of telling stories through sound provides an opportunity to work within constraints required of the population, and questions to what extent a space of collaboration, such that gives all participants agency in outcomes, can exist within a space of incarceration. To this end, sound serves as a medium for cross-cultural exchange, among participants themselves (myself included), and between participants and audience. This project also provides an opportunity to integrate the youth into dialogue around media design, doing so in a way that empowers them, giving them agency over outcomes.

## 5. PRECEDENTS

### 6. 3.1 Community Practice

*Una Casa de Sonidos* draws from a rich tradition of community-based art practice. In their writings on the subject, Suzanne Lacy and Nina Felshin note the rise of community-based practice in relation to the social consciousness of the 1960's and 70's, with Felshin remarking on “the innovative use of public space to address issues of sociopolitical and cultural significance, and to encourage community or public participation as a means of affecting social change” (Felshin 1995: 9; Lacey 1994: 19). Suzanne Lacy's 1991-2 work *The Roof is on Fire*, a collaboration with Chris Johnson and Oakland Public School teachers and students, explored issues of media access and literacy in the classroom. Lacey defines integrity within community in the following excerpt from her essay *Cultural Pilgrimages and Metaphoric Journeys*:

Integrity is based not on artists' allegiances to their own visions but on an integration of their ideas with those of the community. The presence of a diversified audience in these works leads us back to issues of power, privilege, and the authority to claim the territory of representation (1994: 39)

Community-based work, as articulated by Lacy and Felshin, questions both the role of the artist as creator-genius and the primacy of the art-object over the art-process.

The work of Judy Baca provides an example of how a socially engaged practice can connect young people to the history of their community. Her work with *The Great Wall of Los Angeles* project/SPARC (1974-ongoing) alongside hundreds of young mural makers and local community groups created the world's longest mural along the L.A. River, uniting diverse peoples in the common goal of creating a monument to California's multicultural history (Baca 2005: 156-61). Her mural at the Denver International Airport, *La Memoria de Nuestra Tierra* (2000) implicates the viewer in the act of witnessing portions of her own family history: the immigration of her grandparents from Chihuahua to Colorado during the Mexican Revolution and the systemic racism they faced in the US. A digital print, the mural includes archival images obtained both through research in public archives, and through an invitation to the local community to submit photographs of their own family members. She describes it as “an excavation and a re-membling of the Chicano/ Chicana's complexity as indigenous people...a kind of Mayan map not really intended to guide your path, but instead to tell you about the road” (Baca 2005: 164). Baca's community-based work provides a powerful reference point for *Una Casa de Sonidos*.

The work of Rick Lowe, and Tim Rollins inspires the collaborative workshop style of *Una Casa de Sonidos*. Rick Lowe's work with the community of the Third Ward of Houston, Texas, *Project Row House*, 1993-ongoing, rehabilitated a section of 22 row houses in the district, re-imagining them as art galleries and studio spaces, as well as sites for public services including resources for single mothers (Johnson 1994: 1-3). Tim Rollins work with high school students in The Bronx, New York, *K.O.S.*, 1982-ongoing, enables the creation of collaborative visual work based on works of literature to empower inner-city youth underserved by the public school system (Danto 1990: 100-104). *Una Casa de Sonidos* similarly encourages the co-creation of works that celebrate and invite expression of the diverse cultures of participants, sharing their unique attributes and cross-pollinations with the public.

*Binding Sky* (2012), a collaboration between Andrea Polli, Esther Belin, Venaya Yazzie, and the Social Media Working Group at the University of New Mexico, shares the narratives of a community using the medium of sound (“Binding Sky” 2012). In this audio tour, users may use an Android application or a CD, along with a map, to learn about the impact that the San Juan coal fired power plant has had on the Navajo Nation. At once an educational tool, public art piece, archive, and technologically augmented oral history, this piece invites the public to bear witness to the negative impacts of the plant on the air quality of Shiprock, NM. Though much more reliant on the use of text than *Una Casa de Sonidos*, *Binding Sky* provides an example of sonic storytelling through technologically augmented, and yet embodied, means.

### 7. 2.2 Spectromorphology and Psonogeography

The work of Pierre Schaeffer and Guy Debord with the Situationist International heavily influences the *Drifter's Guide* workshops. The dichotomy between the sound object and sonorous object, as articulated by Pierre Schaeffer forms the theoretical foundation for the choice of sound as their primary operative medium. Sonic objects, according to Schaeffer, form in the interaction between the physical manifestation of a sound and its perception by the listener, interpreting the sound in a way independent of the “sound body” that produced it. Through the process of “reduced listening,” the listener reifies this perception of the sound object as independent from the sound body (Chion 1994). A recorded sound, then, becomes a “sonorous object,” or one that is completely alienated from its original source. According to Schaeffer, this object lends itself to reduced listening. Objects, then, become the raw material for *musique concrète* compositions—a form of sonic collage invented by Schaeffer (Schaeffer 2004: 79-81). This sonic collage form (more accurately—an *assemblagé* form) serves as a model for the compositional process of the *Drifter's Guide*.

As discussed in prior sections, the *Drifter's Guide* also draws heavily from the Situationist *dérive*. In response to the planned excursions and public performances of the Dada movement and Surrealists, The Situationist International, led by Guy Debord, developed the practice of the *dérive* (Bonnett 1992: 76-79). Debord defines this as “a technique of rapid passage through various ambiances,” with the goal of experiencing and apprehending the psychogeographical characteristics of public space (Debord 1958). The Situationists often organized their findings spatially, subverting and augmenting the form of the traditional map to reflect their actual experiences in the field rather than institutional demarcations of territory (Debord 1955). In addition to influencing the practice of the soundwalk as articulated by Hildegard Westerkamp and a generation of locative media artists such as the collectives Tactical Sound Garden and NoTours, the *dérive* has also

influenced human/computer interaction through its exploration of the body in space (López 2012; Leahu, Thom-Santelli, Pederson, & Sengers 2008: 203-4). The *dérive* frames the *Drifter's Guide* in a similar fashion.

The challenge inherent to *Una Casa de Sonidos* lies in its inability to mark place using the technique of the *dérive*. Though participants have engaged in a “rapid passage” as Debord defines the *dérive*, their journeys have a very specific intent and stretch beyond the confines of urban space (Debord 1958). Similarly, when designing compositions that tell participants' stories through sound, the form of *musique concrète* does not adequately fit. While the spirit of creating sonic *assemblagé* is preserved in the work, the raw material must come from other sources. For these reasons, *Una Casa de Sonidos* builds from two other conceptual foundations: spectromorphology and psonogeography.

Denis Smalley's discussion of spectromorphology proposes a new paradigm for listening to and understanding electroacoustic music. He describes spectromorphology's focus on “intrinsic features” of sound events within a sound piece, and their connection to associations outside of the piece as “source bonding.” He defines this as “the natural tendency to relate sounds to supposed sources and causes, and to relate sounds to each other because they appear to have shared or associated origins” (Smalley 1997: 110). The framework of source bonding encourages associations, considering them additions to the richness of experiencing the work. Not only *concrète* sounds, as Schaeffer would describe them, but textures, contours, and gestures enter the morphology of listening to and apprehending meaning from the piece. In fact, Smalley makes an argument against reduced listening as it interferes with the process of source bonding (Smalley 1997: 111). It is through these sonic references to the world outside the piece that the listener connects the work to her own experience. Source bonding plays a critical role in listener understanding and appreciation of sounds created during *Una Casa de Sonidos* workshops.

Smalley goes on to describe gestural surrogacy as the process by which the gestures so closely associated with sounding become abstracted. “Primal gesture,” upon which music is based though it largely sits outside musical composition, forms the basis for the “first order surrogacy” (Smalley 1997: 112). This level “is concerned with sonic object use in work and play prior to any instrumentalisation or incorporation into a musical activity or structure.” While “second-order surrogacy” pertains to traditional instrumentation, “third-order surrogacy” projects into a space of ambiguous or unknown source gesture. In this space, “The nature of the spectromorphology makes us unsure about the reality of either the source or the cause, or both” (Smalley 1997: 112). Forms of surrogacy intermingle within *Una Casa de Sonidos*, and the sounds presented drift between them in a fluid way. This approach does not lend itself to reduced listening. Rather, the gestural variety within the work provides a conceptual entry point to listeners, inspiring them to imagine the sources of sounds they hear.

*Una Casa de Sonidos* bends the concept of the psychogeographic map in a way similar to the work of Dani Iosafat. In *On Sonification and Place: Psychosonography and Urban Portrait* Iosafat describes how Debord's psychogeography lends itself to psonogeography (2009: 48). While this process can follow the model of an actual *dérive* in public space, he describes an instance of a virtual drift, taking the form of a psychogeographic map that differs in quality from a soundscape composition made by Westercamp and other, similar artists. As Iosafat points out, “It is reasonable to suggest that soundscape composition is to psychosonography what photography is to expressionism” meaning that psychosonography concerns itself with feelings and impressions over realistic portrayals when constructing place (Iosafat 2009: 48). Such a “portrait” as Iosafat terms his work *Urban Portrait: Thessaloniki* (2008) arises directly from this process of constructing place.

In extending the expressionistic qualities of the psonogeographic work, Iosafat discusses the material used to compose them. He points out that “Location sound alone does not suffice for satisfactory psychosonographical representation. There exists a need for sonority that can adequately satisfy the expressive conditions set forth” (Iosafat 2009: 49). This includes both recognizable and processed instrumentation, as well as *concrète* sounds that exist outside the location portrayed in the piece, produced in the studio to the specifications of the composer. Referencing Simon Emmerson's discussions of mimesis, as well as Smalley's theories about surrogacy, Iosafat explains his use of these expressionistic materials. Since the portrait is limited to the use of sound, its construction, according to Iosafat, requires an extension beyond first-order surrogacy to account for the missing visual stimuli associated with the original place, and to accurately portray its essence. Thus, “this new reality does not seek to contrast the original one, but to blur the distinction between them...by approaching the archetypal, the general form, the philosophical truth,” the effect of these combinations creating “an ambiguous state unique to the sonic portrait” (Iosafat 2009: 50). This ambiguity allows the listener to create their own impression of place: both that of the original and the portrait created by the artist. Lacking the ability to record *concrète* sounds, *Una Casa de Sonidos* participants employed some of these techniques to create sonic portraits of their favorite places.

## 8. 2.3 Witnessing, Standing-in, and Interacting

To encourage an embodied experience of their work, many artists use strategies that involve witnessing, standing-in, and interacting. One such artist, Christina Kubish, employs special headphones that sonify electromagnetic waves to augment walks both in public space and in gallery installations. With these headphones, participants in *Electrical Walks* (2004-ongoing) perceive the patterns of electromagnetic activity ever present in the contemporary urban environment (Tittel 2009). These excursions in public space originated in a series of gallery installations that immersed visitors in a prepared electromagnetic soundscape. This began with her first sound piece, *Il respiro del mare* (1980) in which visitors explore a maze of wires that transmit different sounds via electromagnetic waves. In each setting, the visitor uses special hardware to enhance their hearing, and to conduct a journey that allows them to witness invisible phenomena (Tittel 2009: 60-61). Though the content of Kubish's work differs greatly based on location, each instantiation activates the body itself as a site augmented to reveal hidden layers of meaning in its surroundings. Similar conceptual intersections and divergences exist between *The Drifter's Guide* and *Una Casa de Sonidos*.

The audio walks of Janet Cardiff and George Bures Miller incorporate viewers in acts of witnessing and standing in for absent performers, especially the pieces *Her Long Black Hair* (2004) and *Ghost Machine* (2005). Eirini Nedelkipoulou points out in her writing on these works that, as the visitor engages in media-enhanced walking tours, guided by recordings made by the artists, “The spectator becomes both a witness and a performer” (2011: 119). The author connects this experience to “ecstasis” or, as she describes it in relation to the work of Cardiff and Bures Miller: “an act which triggers the 'ecstatic' modality of the spectatorial body, which is then enabled to project outward in experience” (Nedelkipoulou 2011: 120). The resulting narrative accentuates the absence of a body, with the participant standing in as performer. Thus, “ecstasis as a form of participation enables the audience's physical bodies to merge with the absent virtual bodies of the audio recordings” (Nedelkipoulou 2011: 122). The result of this hybrid mediated and embodied experience implicates the visitor in the narrative presented by the artists in a way that informs the presentation of *Una Casa de Sonidos*.

Interactive art engages the public in similar acts of ecstasis that create hybrid spaces of witness. Jeffrey Shaw's work, *Legible City* serves as a canonical example of this (Shaw, Kenderline and Coover 2011: 189-91). The work spans multiple iterations, of which one depicts a fictionalized Manhattan. It features text delivered from the perspective of actual figures such as Ed Koch and Frank Lloyd Wright, as well as archetypal, fictional characters. Users traverse these virtual cities by riding a stationary bicycle positioned in front of a projection of a CG rendering of the city. In the iterations depicting actual places, the words that represent buildings within the virtual city scale to match buildings in their physical landscapes. In an interview with Roderick Coover, Shaw describes the architecture of such a hybrid city as “a linguistic morphology, its ground plan a psychogeographic network, and its streets a labyrinth of narrative passageways” (Shaw 2011: 225). The texts used in the piece derive partially from archival materials relating to the place depicted (Shaw 2011: 226). This and other immersive environments created by Shaw, including *Eavesdrop* (2004), a collaboration with David Pledger, invite visitors to place their bodies within a simulated environment, thereby encouraging implication in and identification with the texts presented there (“Eavesdrop” 2004). *Una Casa de Sonidos* similarly inserts the visitor into an unfolding narrative using interactive media.

Rafael Lozano-Hemmer also creates large-scale interactive works intended to immerse the viewer in a digitally augmented environment. His piece *Voz Alta* (2008) commemorates the 40<sup>th</sup> anniversary of the student massacre at Tlatelolco. (Lozano-Hemmer 2008). In it, high-wattage searchlights, radio transmissions, and amplified sound, transform witness testimonials and archival audio about the massacre into pulses of light and radio waves. With these apparatus, installed at the site of the massacre, Lozano-Hemmer invites the public to mark and witness the history of that place through the augmentation and amplification of voices. Through elevating the voice of the participant, the work allows for both public reflection upon the shared history of Tlatelolco and for the augmented body to stand in for the bodies of the student protestors killed in that place. Though much less monumental in scale, *Una Casa de Sonidos* takes inspiration from *Voz Alta* as an invitation to reflect upon an otherwise obscured traumatic event.

## 9. 2.4 The Influence of Ethnography

I first became aware of the Tlatelolco massacre during *The Drifter's Guide to Urban Field Recording* at UAM Xochimilco in Mexico City when I brought up the Situationists role in the student uprisings in Paris in 1968. Through dialogue with participants, I became aware of how our different perspectives affect how we view these events. I share this to emphasize the importance of dialogue in my community-based work, and how collaborative narratives emerge from it. In this regard, I and the aforementioned artists, owe much to the discipline of ethnography. This approach goes beyond pure documentary, engaging in reflection on the role of the artist as well as the content and character of their work. This dissolution of division between artist and art work converges with the collapsing of distance between artist and viewing subject. From this emerges a more participatory take on both the process of generating a portrait of a community in a specific place and time, and in the process of witnessing that portrait.

Steven A. Tyler in *Post-Modern Ethnography: From Document of the Occult to Occult Document* casts his frame of the post-modern ethnography as an evocation, one that “makes available through absence what can be conceived but not presented” (1986: 123). This evocation, therefore, transcends the binary relationships between “self and other” and between “language and the world” to form a discourse based on communication rather than a report based on science (Tyler 1986: 123). He describes a post-modern ethnography thus: “A post-modern ethnography is a cooperatively evolved text consisting of fragments of discourse intended to evoke in the minds of both reader and writer an emergent fantasy of a possible world of commonsense reality, and thus to provide an aesthetic integration that will have a therapeutic effect. It is, in a word, poetry” (Tyler 1986: 125) This poetry then evokes the spirit of the community which generates it, the paradigm of observer and observed collapses, and a mutual “story” emerges (Tyler 1986: 126-7). Thus, ethnographic discourse arises from the interaction between visitor and community rather than outside observation. *Una Casa de Sonidos* manifests as one of these collective stories.

John Levack Drever undertakes the task of connecting the ideas articulated by Tyler, among others, to acousmatic composition techniques—an approach particularly relevant to *Una Casa de Sonidos*. Framed by a detailed survey of the history of ethnographic theory, and its adaptation to post-modern discourse, he posits that “ethnography can offer the practice of soundscape composition ways to move forward in a relevant and socially functional way” (Levack Drever 2002: 25). He offers Hildegard Westerkamp's work *Kits Beach Soundwalk* (1989) as an example of this, commending her decision to share information about compositional methods used in the work through narration within audio piece itself (Levack Drever 2002: 24-5). He goes on to remark that an ethnographic approach necessitates that a composer “displace authorship of the work,” instead “engaging in a collaborative process, facilitating the local inhabitants to speak for themselves” (Levack Drever 2002: 25). He insists that the final product be made available to the community from which it was generated, and that responses to it become integrated with the work (Levack Drever 2002: 25). Outcomes take the form of dialogue rather than representation, and a process of discourse takes precedent over a finalized product. As a document of the process that made it, *Una Casa de Sonidos* honors the discourse of its multiple creators and how their narratives weave a cohesive whole.

## 10. 2.5 Material and Pedagogical Issues

The process of introducing technological tools and digital processes to the population served by Casa de Sueños requires specific considerations. The negative environmental impacts of resource extraction, production, and disposal of consumer electronics is widely documented. (Bolaji 2010: 1-3; Chen, Yu, Shen, Zhang, Liu, Shen, Tang, and Chen 2010: 364-6; Duhigg and Barboza 2012: 1; Harden 2001: 1; Mantz 2008: 41-2) Though these specific practices do not occur in as high concentrations in Latin America as in East Asia and West Africa, the peoples of Latin America experience a similar exploitation of cheap labor and relatively lax environmental safeguards to their counterparts in the rest of the developing world. Studies conducted on Latin American countries show that low incomes and life expectancy rates correlate with lack of access to technology. (Avalos & Savvides 2006: 1; Castellacci 2011: 191-6; Daude 2010: 41) This holds not only for industrial and medical technology, but personal computers, internet and cell phones. (Fong 2009: 474) Not only do the peoples of developing nations, in Latin America and elsewhere, receive lower wages and have lower life expectancies than their developed world counterparts, they absorb more negative social and environmental impacts from the manufacture of consumer products, and have less access to technology. Working with the community served by Casa de Sueños requires sensitivity to these issues.

Beyond material and economic considerations, the question of the formulation and deployment of pedagogical styles and models of cross-cultural information exchange prove important. In addition to minimizing the negative impacts of creating technological tools by using responsibly recycled and scrapped parts, strategies exist for improving access to technology. Ackermann et al discuss an approach that informed their “Marginalized Youth: Reducing the Gap” workshop held in Como, Italy in 2009. They found improving and sharing technological tools important to increasing literacy among marginalized youth, but found the constructivist pedagogy articulated by Paolo Freire equally important. (Ackermann, Decortis, Hourcade, and Schelhowe 2009) Bidwell et al, in conducting research with indigenous peoples in Africa, found that introducing audiovisual systems to allow for the capture and sharing of narratives about traditional medicine resulted in some unexpected conclusions. Not only did indigenous participants exhibit knowledge gains in regard to use of technology, but the system designers, who had not accounted for the confound of indigenous cultural logic in their system, learned much from the inclusion of indigenous African perspectives into their design process. (Bidwell, Winschiers-Theophilus, Koch-Kapuire, and Chivuno-Kuria 2011) In a way similar to the aforementioned projects, participants in *Una Casa de Sonidos* use technology in resonant, culturally sensitive, and environmentally responsible ways.

## 11. WORKSHOP PROCEDURE

### 12. 4.1 Original Design

I facilitated workshops at Casa de Sueños for two cycles of a four workshop sequence during January and February of 2013. These two, four week long cycles corresponded to the average length of stay of clients. Despite this, clients frequently arrived at or left the house in the middle of a workshop sequence. Though Casa de Sueños can house up to 10 youth, and all had the opportunity to participate in workshops, the number of participants in each workshop varied slightly based on total occupancy and interest. I began with a general lesson plan for each of the four workshops in the sequence. In the first workshop each youth would construct their own piezoelectric microphone. The second workshop would focus on the creation of sound effects using commonly available items. In the third workshop, we would record musical sounds with these items recast as instruments. The fourth workshop would demonstrate the eight channel speaker array, and introduce the concept of placing the sounds recorded up to that point into a spatialized soundscape. This would generate a discussion that would result in the design of an interactive installation incorporating all the recorded sounds.

Though an intermediate Spanish speaker, I brought in an assistant to help with translation, among other tasks, during the workshops. This aided communication greatly as the Central American dialects spoken by the youth differed greatly from those more familiar to me. I secured some funding from Tumbleweed Center for Youth Development, the parent organization of Casa de Sueños, and received the Good n' Plenty grant through Scottsdale Museum of Contemporary Art. This allowed for the purchase of basic electronics fabrication equipment, speakers for the array, and an audio interface, used to create temporary fabrication stations and a recording studio in the house. Though this modest budget allowed for the purchase of some new equipment, we made use of previously owned materials whenever possible, such as discarded VCR coaxial cable for contact microphone construction. In addition, I met with the staff and management to familiarize them with the project and to gain their trust.

The first cycle of workshops presented several surprises. Initially, workshops all took place on Saturdays and lasted for 4 hours, including a 15 minute break. In the first contact microphone making exercise, the participants each finished their microphones within two hours, resulting in left over time without a planned activity. Working with the group for the first time, my assistant and I had not yet built a rapport with the youth. As a result, the staff had to fill the gap of maintaining order with them. This and the constant noise they created as they experimented with their microphones, without adequate direction, caused some early friction with the staff.

The second workshop had only six participants, as four were reunited with family over the course of the previous week. In this session, youth learned about Foley techniques used in animated films and applied these, in pairs, to create a short narrative using sound. They drew visual scores for these that took the form of storyboards. In the course of this session, it became clear that one of the youths did not speak either Spanish or English, coming from a remote region of Guatemala. Despite these complications, the session yielded several cohesive, short pieces. All of these pertained to the theme “journeys (*viajes*),” a theme coincidentally selected by all three pairs. These journeys featured the sounds of a galloping horse, a bus, and a train, all created with Foley techniques using common household objects sourced from local thrift stores. We listened as each group recorded their piece live. The performance of the train sound provoked a strong

response for the group: as the sounds made on a trash can and box synchronized into a realistic-sounding whole, the room became so quiet it seemed everyone feared to breathe. Many unaccompanied minors reach the US by riding freight trains through Mexico so undoubtedly many of the youth recognized the sound.

In the third workshop, four new youth arrived at Casa de Sueños, bringing the total back to ten. During the day's exercise they created musical compositions that portrayed the feeling of the journeys described in the previous section. Challenges arose catching newcomers up with the rest of the group, compounded with the general difficulty they have integrating into the space having just arrived. In this session, one musically trained youth insisted upon playing the house's commercial synthesizer in his group's composition. The youth intended the piano sound to set the scene in a church. The chimes of a glockenspiel then represent the protagonist's tears as he arrives there. This youth would later reveal that the sound of the piano reminded him of the first time his mother brought him to church--a memory that always fills him with emotion. Even though the sounds made by the commercial synthesizer resonated with participants in a way that the homemade sounds did not, they introduced an aesthetic complication into the work.

Given the spectromorphological quality of sounds produced up to this point, the insertion of second-order surrogacy into compositions clashed, to an extent, with the gestural quality of the first and third order sounds. Also, in regard to group dynamics, two things became clear to me: that this negotiation revealed a dissatisfaction with the techniques presented in the workshops, and that the embrace of more traditional musical approach in subsequent works would privilege participants with prior musical knowledge. In the interest of honoring the sensibility of the youth, the synthesizer piece entered into the pool of sounds recorded. Nonetheless, this did not occur without discussion.

This aesthetic quandary coincided with a difficult fourth workshop. Staff attempted to take the full group of youth for a haircut early that morning, but had to return without accomplishing this to make it back to the house in time for the workshop. The boys were understandably disappointed, and displayed this by disengaging from the day's exercise. Each workshop started with a listening exercise, most modeled on Pauline Oliveros' Deep Listening exercises (Oliveros 2005). The youth displayed particular disinterest to this session's outdoor sound listening and sound-mapping exercise, prompting the staff to hastily interject, attempting to explain the exercise. This intervention by staff revealed how they did not completely understand its goals. It became very difficult to engage the whole group in one activity. The issues that arose in this session, though discouraging, initiated a process of recalibration that would radically change the second cycle of workshops.

### **13. 4.2 Recalibration**

In the second half of the project, I reconciled with the lack of engagement experienced up until that point by looking objectively at some key developments. Both the participants and staff lacked clarity on the goals presented, and I had not given adequate invitation to the group members to propose their own goals. Though language factored into the lack of communication, it did not result directly from the language barrier. Until this point, I delivered the introduction to each workshop from a prewritten script. I did this to make sure the group understood the material presented. This did not assist in building discourse among the group. On the contrary, making mistakes in speaking Spanish and allowing the youth to correct them humanized me, and began the process of dissolving the teacher/student relationship that largely precluded meaningful collaboration. Constant, unscripted dialogue allowed the group to check in with one another, and for the youth share power in directing the workshops.

I began conducting workshops twice a week instead of all day on Saturdays, and almost always stayed for a meal. This strengthened bonds between me, youth and staff. Also, spreading exercises over several sessions took the pressure off youth to perform, especially as external factors impacted moods and willingness to participate. This occurred frequently as the youth remained under stress after their long journeys, and faced uncertainty about their short term situation. Given the prohibition on sharing personal information, the impact their personal lives would have on their participation remained impossible to predict.

At the beginning of the second workshop cycle, several youth remained that had already conducted the contact microphone construction exercise. To account for this, and to encourage more focused experimentation with completed microphones, they concurrently constructed an "instrument" made from a cardboard box to use with the microphone. Each had creative control over the design of their box, using string and found objects to enhance its sonic quality. They also decorated them using colorful tape, paint, and pasted images. The project assistant conducted the microphone fabrication session with half the group while the author led the other half in a sound recording exercise in the house, and each group did both activities. During the recording exercise, the larger group split into pairs, each pair tasked with recording as many sounds as they could in the house without talking, turning the house itself into an instrument.

The recordings made during the second cycle of the workshop all centered around the prompt "what is your favorite place, and what sound can you hear there?" I provided the youth with high quality paper, for both drawing and mounting, and a variety of drawing implements. In contrast to the computer paper and markers used up to this point, the quality of supplies indicated the importance of and interest in the memories recorded in the drawings. Most youth drew their home towns, even their actual homes. All the drawings have a sunny, upbeat quality. This mood persisted in the subsequent recording sessions, framing them in a positive way that encouraged participation. Compositions made in them feature sound effects replicating sounds heard in these places, as well as musical tones made with homemade instruments that evoke the feelings that arise from being there. In playing and recording, one youth per group volunteered to conduct the piece. This formalization of leadership roles allowed for more effective and responsible power sharing among the members.

Though the youth played the cardboard box instruments in recording sessions, these also served as prototypes for wooden instruments. Though I could not allow them access to woodworking facilities, I provided them with the necessary supplies to construct their devices, including scrap wood cut to their specifications. These took the form of traditional instruments: a "guitar," "violin," "drum," and kalimba

made with rake tines. Given their forms, and the excitement around constructing them, some of the youth seemed disappointed with the resulting sound. This resurrected the debate around using commercial instruments in the compositions. Though I never prevented them from doing so, I consistently pointed out the value of constructing our own instruments from start to finish. I emphasized the uniqueness of the resulting sounds, and how the process that produced them itself tells a story. The youth, though skeptical, always agreed. Even so, the commercial synthesizer frequently reappeared.

Though the project began with an intent to create sounds that would populate an interactive composition, two developments confounded this goal. First, the process negotiated during the collaborative workshop sessions resulted not in a bank of sounds, but in a series of compositions. As a result of using an audio interface to record them, these compositions exist as separate tracks played by different individuals, but in the end it was not appropriate or feasible to separate these tracks from one another. Second, the creation of a soundscape using the sounds does not flow from the intentions of the youth in creating them. While I introduced the eight channel array during the workshops, and presented some sketches for interaction using the Kinect, the group simply ran out of time to deeply engage with them. Given this, the idea of taking the material and forcing it to fit the model of an interactive soundscape seemed unethical.

In the final session, all participants engaged in a dialogue about what everyone had learned and would take away from their experience in the project. By that time, only a few youth remained from the very first workshops—including the keyboard player. He spoke about how he had not understood the value of the sounds we created at first, but had come to appreciate them. He went on to tell us how he wanted to take what he had learned back to his home country and teach it to the children there. I was touched by this kindness, and reciprocated, explaining to the youth how much I had learned from *them*, how we were all equals in our collaborations, and how I would always cherish the community we created there at Casa de Sueños. As they helped me carry out the many items we had accumulated over the course of our time there, and I shook each of their hands for the final time, I knew that we had created something very special.

## 14. PRESENTATION

The audio recorded in the workshops was presented in an interactive sound installation—though not necessarily a soundscape—at the Step Gallery at Arizona State University. This occurred alongside the display of the boxes, wooden instruments, and drawings created by participants, that provided context for the sounds heard by visitors. The eight channel array occupied the rear of the gallery, and a Kinect® sensor mounted high above them tracked the space within the speakers. Visitors also heard the compositions made by the youth through headphones at a listening station. Visitors could take free CDs of the recordings with them.

The interactive portion of the exhibition made use of a system I wrote using Processing (Fry and Reas, 2004-11) and Max/MSP (Puckette and others 1990-2013). A custom, vector-based panning algorithm positioned the sounds in the space, each sound represented by an intelligent agent within the program. The system generates and disposes of these agents to correspond with the individual tracks in each composition. It has three states of activity that determine which compositions play. The sound pieces that have more buoyancy and dynamics play in a state of no activity within the range of the sensor. In this state, the sound agents engage in a wandering behavior within the space.

When a user enters the space, the sound scene immediately changes, playing from a different bank of compositions. These scenes feature more persistent sounds, often making use of the homemade instruments. As visitors enter, all sounds remain still and quiet except for one that begins to “follow” them around the space. As an additional user enters, another sound increases in volume, “chooses” them, and “follows” their position. If all users leave the tracked area, all sounds fade away and the playback mode returns to a state of no activity. If more users enter the space than there are tracks in the current scene, then the train sound plays and no interaction with the system can occur until it concludes.

To protect their identities, the youths' names, images, and other identifying features are not shown. Dual challenges emerge from this constraint: how to engage exhibition visitors with the material presented, and how to assert the presence of the youth in the work. The design of the interaction accentuates the absence of the youth in the space while implicating the visitor in conjuring the traces of their presence. In this way, the visitor uses their own body to stand in for the absent bodies of the youth of Casa de Sueños. This act triggers the evocation of their sonic stories, completing the process through which they are told. The act of physically standing in for the youth allows the visitor to witness both the presence and absence of the that youth, and given enough time and interest, to reflect upon their meanings.

## 15. ASSESSMENT

Though not in any way a formal study, one can assess *Una Casa de Sonidos* in relation to the effectiveness of its different phases in furthering the goals of the project and delivering demonstrable outcomes. This assessment follows from an informal research agenda that uses sonic storytelling as a medium for cultural exchange, as a way to integrate marginalized voices into a discourse around media design. This requires the creation of a collaborative space that empowers youth to tell their stories, even within a setting of incarceration. Additionally, the design of workshops intends to introduce participants to certain skills. Finally, goals for presentation and public engagement center around the act of witnessing a situation hidden from plain sight: a desire to implicate the public, to involve them in the process of completing the work.

Based upon these general goals, one can conclude that the youth were empowered to tell their stories in a way that resonated with them. They assimilated the skills and techniques presented easily, and used them to the extent that they desired to achieve their own impressions and expectations of the process of sonic storytelling. Though never required to participate in exercises, most chose to do so. Though never prohibited from using commercial instruments, even those that knew how to play them either elected, instead, to use their own devices to create sound, or to augment traditional instrumentation with these sounds. The substantial volume of work produced in small

groups attests to the effectiveness of the collaborative space negotiated within the workshops. Even within the sizable constraints imposed by incarceration—not having the ability to come and go as one pleases, being constantly watched—our creative community thrived and produced some very powerful work.

An effective assessment of the installation presents difficulties. Without some formal data collection, such as participant surveys or pre and post interviews, any such assessment would rely upon conjecture. I feel that the organization of materials within the gallery space did not adequately impart the character of the workshops. I wonder if I capitulated too quickly to the conventions of the “white cube,” and will consider this in future iterations. In regard to visitor engagement with the work, the form of the presentation requires a certain level of attention from the visitor to implicate them in both the act of standing in and the act of witnessing. Nonetheless, if they spend a reasonable amount of time interacting with the space, they become part of the work—consciously or not. Even a cursory understanding of this requires some time and effort on the part of the participant, of course, perhaps more time and effort than one can reasonably expect. Within this sober observation, nonetheless, lies another important meaning of the piece: some things are hidden only through neglect to acknowledge them, and this acknowledgement requires some effort to undertake.

## 16. CONCLUSION

*Una Casa de Sonidos* as a sonic portrait, reflects the experiences of the participants who made it. Created within a process of collaboration, operating under the pressures imposed by incarceration, the work attests to the resilience, uniqueness, and optimism of the youth of Casa de Sueños. This collaborative process extends to the presentation of the work, where gallery visitors, through the act of “standing in” for the absent youth, complete the process through which the sonic portrait manifests. Through this act of witnessing, gallery visitors implicate themselves in the work, giving corporeal form to the stories of the youth told in sound. In this way, the youth of Casa de Sueños and the gallery visitor find themselves united within the “house of sounds.”

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