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Birds Into Bodies: Synthesizing Dance and Research

Margaret M. Brackey
Professor Adelheid B. Strelick
Dean Maggie Lally and Dr. Matthias Foellmer
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Abstract

How does art galvanize change? This question is answered through two undertakings: the Bird Project, a study of the frequency of bird-strikes with the windows on the Adelphi University Garden City campus; and Thrash/Hold, a dance which choreographically interprets the Bird Project. This process of unification is posited as Social Practice Art, in which Thrash/Hold is viewed contextually as a work which transfers meaning. This paper argues that dance, as a physical and emotional art form, is uniquely able to transfer information to the audience through the interaction of mirror neurons. The paper concludes with an appeal to Adelphi University to address the issue of bird-strikes, recognizing that this institution has had multiple opportunities to engage with the information in different formats, including a formal presentation and dance.
How Does Art Galvanize Change?

This thesis is a compound, enabled by the concepts of Social Practice Art. One part is a study of the frequency of bird-window strikes on the Adelphi campus (the Bird Project) and the other a new dance work (*Thrash/Hold*), choreographed by me on a cast of ten performers. Through the unification of these two typically disparate disciplines, I seek to enhance the functionality of descriptive research and expressive art in response to the question, how does art galvanize change? Interpreting the Bird Project choreographically takes research off the page and into embodiment, where dance provides an opportunity for understanding and for empathy – therein lies the potential for change.

This thesis, like the projects that comprise it, will be organized in two parts. In the first section, the purpose of art is examined. Art educator and scholar Tom Anderson (2005) elucidates the role of art in conceptualization and communication – communication being the main challenge and goal of the dance, *Thrash/Hold*. An interview with Canadian Choreographer Crystal Pite (BBC Newsnight, 2017) then hones into dance as the vehicle for communication – as opposed to studio arts, which Anderson focuses on. Pite’s view carries significant value as a window into the creative process of one of the most successful choreographers today. From the theoretical, the focus shifts to the scientific by recognizing the vital role of mirror neurons in captivating and communicating with the audience (Berrol, 2006). Lastly, art advocate Clayton Lord (2012) synthesizes these theories with his work on audience participation in dance, vis-à-vis mirror neurons.

The second section of this paper is a comparison of the parallel progressions of the Bird Project and *Thrash/Hold*. The first subsection describes the Bird Project’s methodology. It is here that the research of Dr. Daniel Klem Jr. (2014), an ornithologist and pioneer of researching
bird-window strikes, helps to explain the collision-inducing windows of Adelphi University. The Bird Project is then compared to a similar study at the University of Utah, emphasizing the seriousness and magnitude of the issue at Adelphi. The following subsection demonstrates the process of unification – how a study of the frequency of bird/window strikes on campus could be translated into dance. To conclude, methods of deterring bird/window strikes are provided alongside a call to action to, quite simply, save the birds.

Before beginning I want to clarify the argument – that dance is a vehicle for galvanizing change – and expand upon two tangential points. When the Bird Project started, a question often asked was, “what is your major?”, and upon hearing my response, asking, “then why are you doing this?” It seemed inconceivable that a dance major could also be an advocate for sustainability and wildlife conservation. This limiting mindset is arbitrary, students are multifaceted individuals and much more than our areas of study. Additionally, boxing in artists restricts collaboration (and therefore Social Practice), curiosity, and exchange. Just as I argue the Bird Project requires *Trash/Hold* to be comprehended, individual artists should be known by their lives outside of the studio as much as by what they create inside. From this perspective I present two accompanying discussions. First, by including art in scientific processes, both the process itself and its findings become more accessible through empathy. Second, I object to the culture that presumes dancers are only moving bodies and instead push for the inclusion of diverse interests and experiences. I argue that thinking, critical, vocal dancers are beneficial and indeed necessary not only to the artistic world but to the world at large.

**Method**

The purpose of art in communication (Anderson, 2005), the opportunity of a theater space to gather an audience to share an experience (Pite, 2017; Lord, 2012), and the
psychological way information is shared (Berrol, 2006) are all useful to conceptualize Thrash/Hold’s purpose. However, Thrash/Hold’s dependance upon the Bird Project means these theories are held in the container of Social Practice Art. The dance should be viewed as Social Practice because of the integration of inspirations from outside the studio – in other words, the information required to galvanize change. The windows and birds themselves, being so central to the Bird Project, needed to be incorporated into the dance.

What is Social Practice Art? Harrell Fletcher (2020), a Social Practice Artist and Professor of Art and Social Practice, is ironically hesitant to define it. He offers multiple definitions but concludes “Artists can work in whatever way they want including making paintings that are shown in galleries as well as organizing participatory walking tours” (Fletcher, 2020, sec. 4.13.14). With this open-ended assertion, I return to the earlier descriptions provided by Fletcher to define my own process of Social Practice. For the specific development of Thrash/Hold, Social Practice Art functioned as way to “develop inquiring, knowledgeable and caring [art to] help to create a better and more peaceful world through…collaboration…site-specificity, and interdisciplinarity” (Fletcher, 2020, sec. 4.13.14). The collaborators on Thrash/Hold included the dancers, the Projection Designer, the University’s Groundworkers and Facilities Management team, and local wildlife advocates – all of whom by providing information became incorporated into the creative process.

Art, according to Anderson (2005), is created to “make sense of things” (p. 31). He extrapolates, “When we express ourselves through making art, we create something tangible to look at, hold, reflect on, feel, and try to understand in our minds and bodies” (Anderson, 2005, p. 31). He articulates a process of knowledge integration via art creation that was exemplified during the choreographic process. Thrash/Hold helped the researcher to “make sense of things”
and allowed the choreographer “to recognize and order [her] own growing experiences” with the Bird Project (Anderson, 2005, p. 34). While pragmatism had a place in the presentation of the Bird Project’s findings,¹ the researcher’s emotions – particularly anger, frustration, and grief on behalf of the birds – had no outlet. Choreographing the data from the Bird Project allowed the researcher to release the emotional labor² of data collection and dissemination into an inherently empathetic form: dance. Of course, in this case, the researcher and choreographer are one and the same. Limiting the actions of one would have inhibited the response of the other. Put another way, “The art-making experience is potentially a personal world-making experience that involves our whole living being, working its way toward fulfilling its deeply personal conclusions” (Anderson, 2005, p. 34).

The total involvement Anderson (2005) describes has a counterpart in Fletcher’s (2020) holistic vision of Social Art creation taking place outside of the “white room” of the studio (sec. 3.8.14). Fletcher’s (2020) objection to “popular conventions” of working in studios³ is that “The uniformity of this practice in a way runs counter to the concept that artists are free to do whatever they want” (sec. 3.8.14). He believes uniformity makes both the location and the art produced there “generic and predictable” (Fletcher, 2020, sec. 3.8.14) and therefore not, in Anderson (2005) words, “world-making” and “deeply personal” (p. 34). For this process, the

¹ On April 4, 2022, the findings of the Bird Project were shared with the Adelphi University Sustainability Council to raise awareness of bird/window strikes.
² “Regulating or managing emotional expressions with others as part of one’s professional work role.” Hothschild, A. R., as cited in “What is Emotional Labor?” (n.d.). PennState College of the Liberal Arts. https://weld.la.psu.edu/what-is-emotional-labor/
³ Fletcher primarily addresses traditional practices of studio arts, such as painting, drawing and sculpture. Yet his observations about studio work apply to dance studios and theaters.
research\textsuperscript{4} gathered outside the studio was translated into \textit{Thrash/Hold} to develop the choreography,\textsuperscript{5} making it both personal and constructive.

Site specific work is common in Social Practice Art. \textit{Thrash/Hold} could be site specific and performed, for example, next to, through, or around the windows. However, when constructing the dance, I consciously departed from this convention of Social Practice and instead placed \textit{Thrash/Hold} in Fletcher’s (2020) white room: a proscenium theater with a stage covered in marley and enhanced by artificial lighting and sound. This was done to “allow the “art” to stand out without any interference from anything that might disrupt…it”, which Fletcher (2020) views as a negative effect (sec. 3.8.14). Yet this was exactly the intention. \textit{Thrash/Hold} informs about bird strikes, the most common cause of which are not skyscrapers but single-story homes and low-rise buildings, such as those observed in the Bird Project (Klem, 2014, p. 354). By putting \textit{Thrash/Hold} in a white room the message becomes transferable and implicates the audience as abettors of bird strikes. This issue is not unique to Adelphi, it is global. The contribution of average homes to the death-toll must be recognized. While not site specific, \textit{Thrash/Hold} remains what might be called site general since the theater is on Adelphi’s Garden City campus. When the audience leaves, they face the very windows just invoked in the dance.

Besides being a Social Practice, \textit{Thrash/Hold} is a contextual product. That is, it is created not for its intrinsic value, but for its ability to “communicate something that counts to someone else,” which Anderson (2005) cites as a “social” motivation\textsuperscript{6} (p. 31). He clarifies, “contextualists believe…art is or should be made and used for something beyond itself” (Anderson, 2005, p.

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\textsuperscript{4}“not necessarily academic research but…a more casual and situational form of research” (Fletcher, 2020, sec. 3.8.14). The research of \textit{Thrash/Hold} was the research of the Bird Project, but also incorporated emotional elements not typically expressed in study reports.
\textsuperscript{5}See p. 14-20
\textsuperscript{6}This invites aspects of Social Practice into the conversation when viewing the social exchange to be art itself.
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32). As noted above, I value *Thrash/Hold* as a way of emotionally and cognitively processing the Bird Project. This is the first purpose of *Thrash/Hold*, “understand[ing] things in their own right” (Anderson, 2005, p. 32). Its second function is “conveying knowledge to others” (Anderson, 2005, p. 32). The dance was developed specifically to “be of interest to a wider public than just the art going one” (Fletcher, 2020, sec. 3.15.14). But the inverse of this was also true: the issue of bird strikes would be communicated to a wider audience than only environmental activists. The “art going” public, as Fletcher (2020) refers to them, who may not have as deep a connection to the natural world, are given an opportunity to connect with that world through dance.

When presenting the Bird Project’s findings to the University’s Sustainability Council, numbers, graphs, and photos were the tools of communication. For administrators accustomed to receiving information in this way, these tools were quite effective. However, to galvanize change the entire community must become aware of the issue. *Thrash/Hold* presented the same information as the Bird Project, but in a more tangible form for the dance community at Adelphi. While it is possible to have an emotional response to statistic-based information, in this case, the number of dead birds, the connection is intellectual whereas in dance the connection is inherently physical and therefore empathetic. The reason for this inherent physical connection will be discussed later as a result of mirror neuron exchange. What must be recognized here is the function of *Thrash/Hold* as “a communicative activity”, in which it “produce[d] exacting descriptions of our sensual experiences of the world” (Anderson, 2005, p. 32). *Thrash/Hold* provides a different entry point to the same information as Bird Project. In this work there are opportunities for the audience to connect with the information emotionally as well as visually,
which galvanizes change. This purpose of *Thrash/Hold* beyond being only movement on a stage reveals a contextual view of the dance.

Here, I turn to Crystal Pite (BBC Newsnight, 2017) on the specific role of choreographer in the “communicative activity” of dance (Anderson, 2005, p. 32). Faced with nearly the same question this thesis grapples with, does “art [have] the ability to affect change,” Pite responds, “I don’t expect it to” (BBC Newsnight, 2017). However, in Pite’s view, concert dance provides a unique location for many people to witness the same visual and emotional experience. This departs from Fletcher’s (2020) skepticism of “white room[s]” (sec. 3.8.14) somewhat as Pite views performing on traditional stages as a chance to bring people “together in the theater” (BBC Newsnight, 2017). There, she believes, “we have an opportunity to open up those channels to the humane and to each other … [and be] able to have a conversation” (BBC Newsnight, 2017). Ultimately, this is Fletcher’s (2020) goal as well, the two artists simply use different environments.

Is dance, as Pite suggests, an effective medium for having a conversation, being – usually – without speech? Yes. Not only is dance communicative but it is particularly suited to transferring “emotional cognition or understanding” due to the interactions of mirror neurons (Berrol, 2006, p. 303). Mirror neurons simultaneously respond in a brain in “relationship to another” (Berrol, 2006, p. 307). “Like a mirror image, the same sets of neurons are activated in an observer as in the individuals actually engaged in an action or the expression of some emotion or behavior” (Berrol, 2006, p. 303, emphasis mine). This means the audience literally joins the dance through their psychological response. Clayton Lord (2012) notes that due to this, “watching an artistic work requires an extraordinary amount of participation and attention” (p. 35).
To build upon Lord’s observations of neural participation by the audience, *Thrash/Hold’s* choreography is briefly analyzed. A motif in the dance was abrupt falling, either from standing or in the middle of a movement phrase. This was introduced early in the dance – the first movement was a dancer running onstage then falling. Both the sound produced by bodies repeatedly hitting the stage and the action itself would cause visceral reactions. By witnessing the falls, symbolic of bird/window strikes, the audience’s mirror neurons enabled their participation in the life cycle of the birds. Lord (2012) argues that “participation” on the part of the spectator “has the absolute potential to transform personal ideas, instill a respect for the wider world…and…create active engagement” (p. 38). Such complete captivation is hard to inspire through statistical methods, such as the PowerPoint shared with the Sustainability Council, because the information is not shared body to body. This body intelligence is only enabled through the “inherent mirroring properties [which] help explain the mechanisms of social, kinesthetic and emotional cognition or understanding” (Berrol, 2006, p. 303). Dance galvanizes change because it is a physical art form, allowing communication to enter the bodies of the audience directly through sympathetic responses – through mirror neurons.

To synthesize thus far, *Thrash/Hold* as a piece is contextual art, supported by the process of Social Practice. It was created not as art for art’s sake, but rather to share an understanding of the world (Anderson, 2005). The medium, dance, is what enables communication and participation with the audience, and it is these exchanges which support the piece’s intention to galvanize change. Pite concludes this section with this simple realization, echoed by *Thrash/Hold*: “if I am going to talk about something so important to me, it had better be through dance…[because] it is the best hope I have to speak clearly and truthfully about something” (BBC Newsnight, 2017).
Processes

The Bird Project

In November of 2020, while studying in the south corridor of the Nexus Building, I was interrupted by a loud thud – a bird had hit the window. Later that same day, a second one struck. Over the next few weeks, three more birds were found either stunned or killed from striking the glass. In response, I contacted the Assistant Vice President for Facilities Management. He supported my concerns and responded by contacting the architect of the University Center and suggesting some deterrent options. One option was to use owl decoys. Though decoys seem like a simple solution it is a largely ineffective one since they do nothing to reduce the reflectivity or increase the visibility of the glass, which is the cause of bird-strikes (Klem, 2014). To invest in a more permanent solution additional research would be necessary to assess the deadliest locations.

Initially, a motion-activated wildlife camera was used to observe the windows of Nexus. However, the camera was not sensitive enough to pick up bird activity and it became apparent that physically monitoring the windows would be most effective. According to Adelphi Groundworkers, bird strikes have been an issue on campus for years, particularly at the Center for Recreation and Sports. Aside from the largely useless owl decoys, there are no collision deterrents used by the University.

In August of 2021 the Bird Project formally began. Using the fitness app Strava to document the route, the windows of the Nexus Building, University Center (UC), Center for Recreation and Sports (CRS), and the Performing Arts Center (PAC) were checked almost daily. Any birds found were photographed as were the windows they stuck so both could be identified later. In October Residence Hall B was added to the study based on recommendations from
University Groundworkers. Additionally, bird-strikes reported by other students were included in the data. These would occur at buildings not consistently monitored by the study (such as Residence Hall A) and often the species of bird was unable to be determined.

The changing seasons affected strike frequency, peaking in October with seventeen recorded strikes. By the conclusion of the study on December 7, forty-nine birds were recorded as strike victims (see Figures 1, 2, and 3). The Nexus Building had the most strikes recorded at eighteen, which were distributed primarily around the southeast corner and along the eastern windows.

**Figure 1**

*Frequency of strikes by building*

![Bar chart showing frequency of strikes by building](image)  

*Note.* The abbreviations are as follows: NEX – Nexus Building, UNC – University Center, CRS – Center for Recreation and Sports, PAC – Performing Arts Center, RHB – Residence Hall B, RHA – Residence Hall A.
Figure 2
*Frequency of strikes by species*

![Bar chart showing frequency of strikes by species](chart1.png)

Figure 3
*Frequency of strikes by month*

![Bar chart showing frequency of strikes by month](chart2.png)

**Note.** The data for August and December is incomplete since monitoring only began August 29 and ended December 7.
Forty-nine is likely a very low estimate of strike victims for multiple reasons. First, the windows were not checked every day. Second, though most of the birds were found dead, it is certain some strike victims were able to fly away after colliding and were therefore not recorded. However, even birds that are only stunned often die later due to internal bleeding. Lastly, bodies were likely removed before being counted, either by Adelphi Groundworkers or predators. Additional studies of strike frequency at the Garden City campus would help answer if the data from fall 2021 is anomalous, if the frequency of strikes changes during other seasons, and if – once implemented – deterrent strategies are effective.

To compare, a similar study conducted at the University of Utah recorded thirty-nine bird-strikes at eight buildings from September 12, 2019, to January 24, 2020 (Brown et al., 2020). The researchers at Utah were sufficiently concerned by their findings, which were fewer bird-strikes than Adelphi, that collision mitigation techniques were used. In this case, Feather Friendly® deterrent markers were applied the next year in addition to the “ORNILUXultraviolet®” and fritted windows already in place (Brown et al., 2021; 2020, p. 1). Brown et al. have published annual studies from 2018-2021 and documented the reduction of bird-strikes with the addition of “mitigation techniques” (Brown et al. 2020, p. 2). From 2018-2019 collisions were reduced by 71 percent after the installation of Feather Friendly bird deterrent film, suggesting this to be a highly effective strike deterrent (Brown et al., 2019).

**Choreographing Thrash/Hold**

Solving the bird/window strike issue on campus became a passion for me and I knew I wanted to use my honors thesis to address it. One source of inspiration was how, over the course

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of the pandemic, art took on different roles, especially in 2020 in response to the murder of George Floyd.\(^9\) These examples of Social Practice Art made me wonder if activism was becoming a necessary part of art. If so, how could my art bring about the change necessary for the birds of Adelphi’s campus? However, I was not looking to protest in the same way and instead adapted Social Practice to fit the needs of the Bird Project.

Creating \textit{Thrash/Hold} took two semesters. In August of 2021 experimentation for the dance started. To represent the windows of campus on stage, I wanted physical barriers for the dancers to confront just as the birds were forced to. A set made of glass was unrealistic due to durability, weight, and expense, so plywood boards were used. Seven dancers plus one understudy were cast.

In translating the Bird Project into dance, I faced the challenge of portraying people as birds but did not want to go the route of \textit{Swan Lake}\(^{10}\) – each person literally standing in for a bird. Technology provided a different option as well as an opportunity for collaboration. Projections were used to build an environment on stage and to create images of birds, which operated both as ghosts and as reminders of the ephemerality of life. The movements in the dance were generated from that of birds. Especially intriguing were fluttering, fliting, stalking, and swooping motions. Because of the detailed photos taken of the dead birds for the Bird Project, I became intimately acquainted with physical details, such as their delicate claws and death postures. One body in particular – crushed and distorted – caught my attention. The wings


were twisted inward toward the body, the head arched up and backward, and the legs were crimped beneath it (see Figure 4). The uncomfortable posture of the body encapsulated the suffering of the birds – by copying it the dancers would experience that same, though limited, suffering (see Figure 5).

**Figure 4**
*American Redstart, Aug. 29, 2021*

![American Redstart, Aug. 29, 2021](image)

**Figure 5**
*Thrash/Hold, “Baby Bird” section. The dancers’ posture copies that of the bird in Figure 4*

![Thrash/Hold, “Baby Bird” section. The dancers’ posture copies that of the bird in Figure 4](image)

The final version of *Thrash/Hold* was performed on May 13 and 14, 2022 (a work-in-progress version was shown in December, 2021). The plywood boards were replaced by three, eight by three-foot soft flats: wooden frames with canvas stretched over and handles on the
backside for easy movement. These allowed for more projections and their large size better fit the space of the theater. To maneuver the flats, three additional dancers were invited into the process as invisible but integral “wall movers”. Choreographically, the flats were used by the dancers to hide behind, to weave through, to make a puppet show, and to create pathways. There were six sections, each of which corresponded to an aspect of the Bird Project. The first section, “Baby Bird,” took place in the summertime, indicated by the leafy trees projected. “Baby Bird” explored birds in nature, without the obstruction of glass. It also referenced the breeding season for birds, which is a time of fewer strikes because migration has concluded. The second section introduced obstacles and was a transition into the third section, “Wall”. This symbolized the deadly fall migration period when young, inexperienced birds travel vast distances and are most often the victims of window strikes. Driving drumbeats matched the dancers’ throwing, falling, and jabbing movements. “Shuffling Cards”, the fourth section, was a dance of the flats in the guise of windows. No dancers were visible while the flats wove and floated across the stage. The “Ghost Section” was an eerie invocation of the residue of bird/window strikes. After a strike an impression of the bird is left on the glass (see Figure 6). Using costumes and partnering, a similar effect was created in Thrash/Hold. The final section was the “Maze”, in which the dancers traversed a specific floor pattern that mimicked the route of the Bird Project (see Figures 8 and 9).

11 See Klem (2014), Brown et al. (2020).
Figure 6
*Impression of a bird left after a window strike*

Figure 7
*Interpretation of a bird strike in the “Ghost” section*
These are a few specific examples of how the Bird Project was integrated into *Thrash/Hold*. Though this explains what was intended, it does not make it the only or correct way to view the dance. Other interpretations and connections are encouraged. Most importantly,
though, unifying the parallel processes maintained my investment in both, and unified me as researcher and choreographer.

**Conclusion**

Before concluding, one topic must be addressed: bird-strike prevention. An estimated 988 million birds die from window strikes in the U.S. each year (Brown et al., 2019). There are two causes of collisions: reflectivity, where the sky or vegetation is reflected giving the illusion of a place to fly to, and transparency, where the bird can see through to vegetation or space on the other side (Dr. Klem, 2014, p. 351-352). Put bluntly, the visibility of glass must be increased. Many products, such as Feather Friendly® and ORNILUXultraviolet® mentioned above, exist for this purpose. However, the whole window must be covered to be truly effective. Though any visual noise helps, small birds will simply fly where the sticker is not. This is why outlines of birds of prey are no more effective than a single square sticker. It is not the shape but the space it fills. To find suitable products, the American Bird Conservancy provides a database of bird-strike deterrents and rates each one on its “Threat Factor,” or ability to reduce collisions. “A TF of 30 should reduce collisions by at least 50 percent and is the ABC’s upper threshold for categorizing materials as bird friendly” (American Bird Conservancy).

This thesis emphasizes the necessity to do something. As long as the windows are unchanged, we all are implicated in the deaths they continue to cause – students, faculty, University workers, but especially those with the ability to enact the necessary change: administrators. My role, through the Bird Project and Thrash/Hold, was to galvanize change. This I have done. Using multiple methods of communication Adelphi University has been made aware of the bird-strike issue and can no longer claim ignorance. Whether through data in a
PowerPoint or emotional cognition in dance, the knowledge has been shared. This is art
galvanizing change. Now, let the change begin.
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