# The Future of Social and Green Infrastructure: Building Communal Connections with an Integrated Architectural Approach

**HYESUN JEONG**
University of Cincinnati

**BRIAN HAMMERSLEY**
Hammersley Architecture

**Keywords:** Adaptive Urban Design, Public Green Space, Cultural Placemaking, Community Engagement, Social Justice

**This research-design project, sponsored by the American Institute of Architects' national Upjohn Initiative Program, enacts the idea of adaptive reuse as sustainable place-making, incorporating small-scale architectural interventions that promote walking and cycling, and serve to foster social cohesion in urban communities.**

## A PROBLEM TO BE ADDRESSED: UNDERUTILIZED CITY SPACES

Historically, cities have grappled with the redevelopment of economically stressed areas. Vacant lots, or those with dilapidated structures, and empty storefronts mar the value of existing homes, rob the city of tax revenue for schools, and raise the anxieties of those living there. Chicago, in particular, has struggled to support the development of its south and west sides for over a generation. While vacant lots on the north side of the city tend to be rapidly developed into single-family housing, underutilized or vacant spaces on the west and south sides tend to linger, undermining relationships and opportunities within these communities. Areas in the city with a concentration of vacant lands and buildings, often in combination with a scarcity of walkable public spaces and amenities, struggle with higher crime rates and social disparities. Our purpose in this proposal is to outline both a creative approach to addressing these problems and a process for implementing this approach in a way that respects and involves the community.

## THE VALUE OF URBAN GREEN SPACES

Notably, urban green spaces, such as parks, gardens, and trails, are indispensable to the life of a city. They provide social, environmental, and economic benefits that promote the quality of life. Green spaces reduce the intensity of urban heat islands, create shade, and provide gathering spaces for cultural and social cohesion (Jennings and Bamkole, 2019; Park et al., 2017; Rizwan et al., 2008; Kweon et al., 1998). Such spaces also contribute to a positive impact on housing values and business activities (Czembrowski and Kronenberg, 2016; Crompton, 2004/ 2005; Nicholls and Crompton, 2005). The Trust for Public Land's annual City Park Survey[1] compares the characteristics of green space in US cities using variables such as total acreage, walkable access, equitable access, and amenities. The metrics of walkable and equitable park access tell us whether parks are evenly distributed and if they are used by local residents. According to its report (2022), Chicago and New York have nearly 100% walkable park access, significantly higher than Los Angeles (63%) and Houston (60%). In terms of equitable access, Chicago again does well: low-income residents have more access to parks than higher income residents, an anomaly among major cities. Chicago's parks are, therefore, tremendous assets that can and should be utilized in neighborhood development plans.

## THE PROBLEMS WITH TRADITIONAL DEVELOPMENT AND ENVIRONMENTAL ADAPTATION

Chicago's traditional solutions to the re-development conundrum reflect two approaches that have resulted in limited benefits: a) the large scale, typically philanthropist driven, community center or school that ultimately becomes a well-intentioned and relatively successful island, but within a still struggling community (Greater Grand Crossing's Comer Youth Center and Charter School being a prime example), or b) the creation of a public amenity that feeds the gentrification. This second option is a relatively new and popular approach, and it is true that repurposing abandoned infrastructure into green spaces has been a successful model for sustainable development in many cities. Our initial case studies found that these reclaimed trails, such as the Katy Trail in Dallas and the 606 in Chicago, had a significant economic impact on surrounding areas by stimulating new mixed use housing developments and increasing foot traffic to commercial businesses nearby. About 2,500 people visit the Katy Trail everyday for jogging, biking, skating, and walking, making the Trail a green destination. According to the Dallas Park System study (2016) by the HR&A Advisors Inc.,the Katy Trail has generated nearly $880,000 in real estate value per acre in surrounding neighborhoods over the past twenty years.

The problems with this kind of development stem from the unintended consequences of gentrification driven by large real estate developments that do not necessarily fulfill the needs of the community but often drive a substantial rent increase (Hyra, 2017; Zukin, 2010).

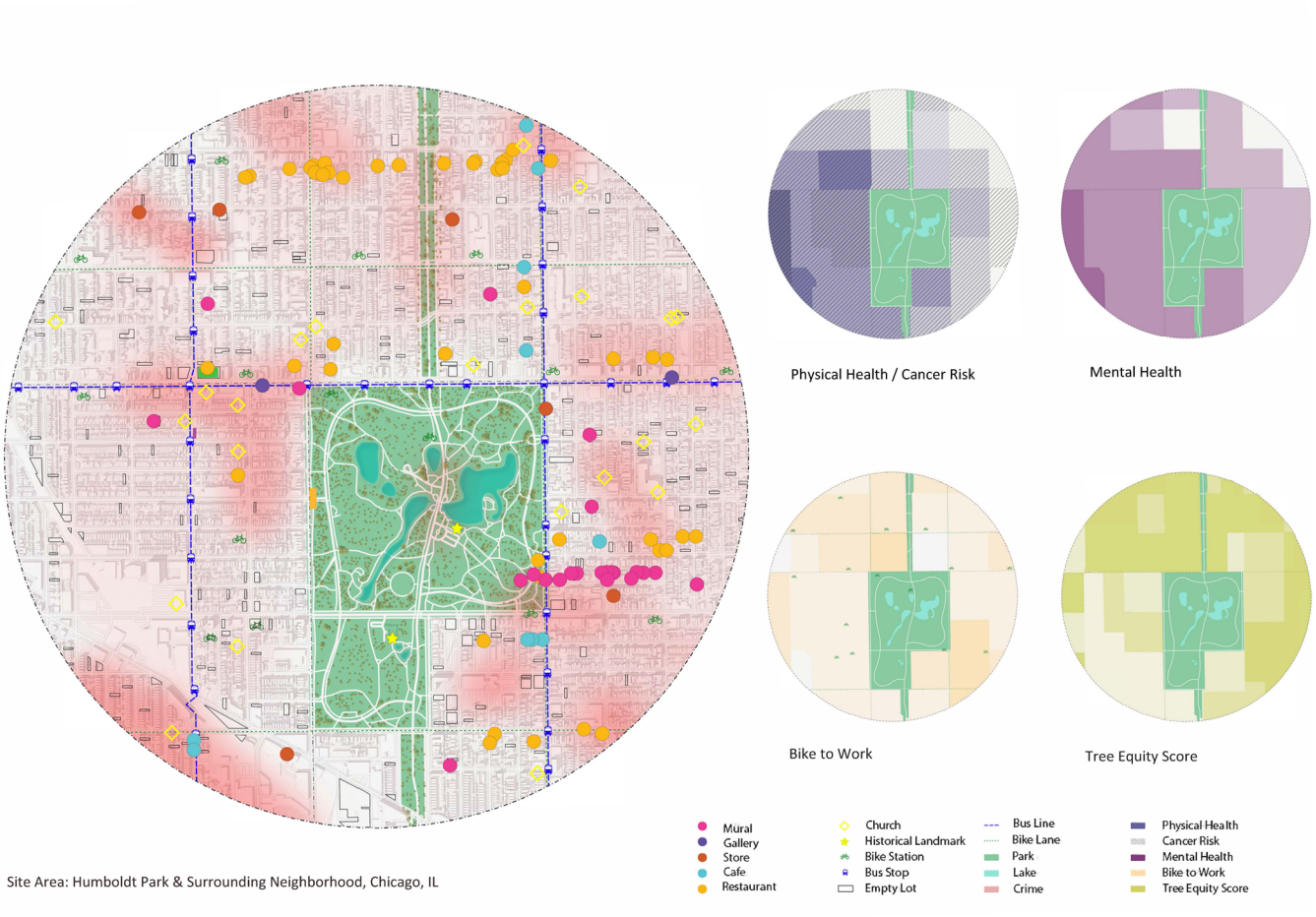



Figure 1.*Existing Site Area Data Mapping.*

Recent studies (Brown–Saracino, 2009; Checker, 2011; Anguelovski, 2016) have found that creating urban sustainability also often drives paradoxical politics and environmental gentrification reinforcing segregation and social inequities. Our initial study also found that while these trails like the 606 and the Katy Trail were models for transformative revitalization, they have contributed to the rapid rise of housing costs (Jeong & Ables, 2024). In linking a wealthier area to a poorer one, the 606 essentially provided a conduit toward gentrification, increasing the number of wealthy residents in an area that previously featured significant affordable housing especially for its Latino population.

## PRELIMINARY PROCESS: GATHERING THE DATA ON HUMBOLDT PARK, CHICAGO

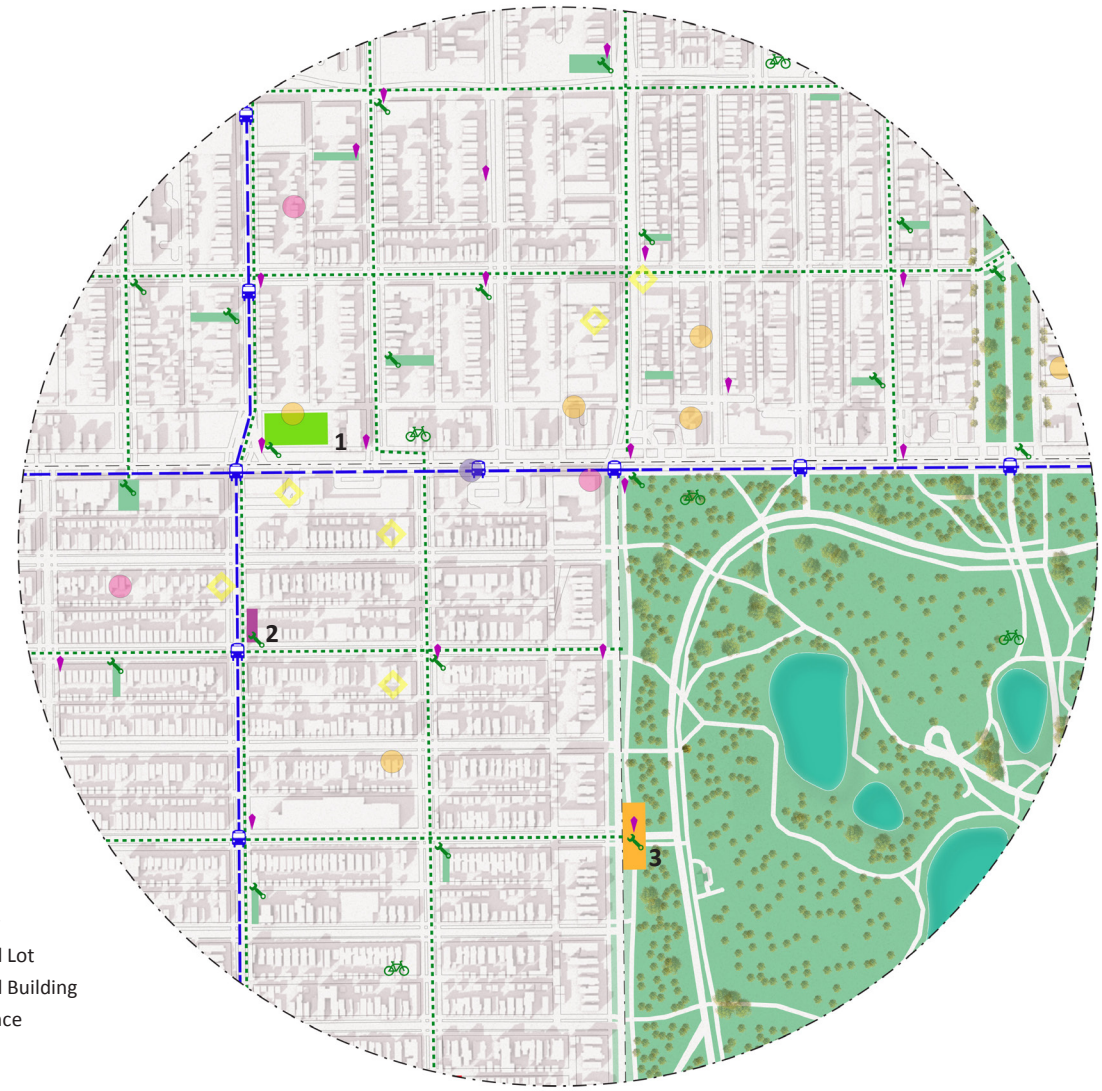
Given the findings of our research, our project poses a question to the public: how could an urban green space play its role in promoting social and health equity without significant risking gentrification to the area? We focus on the "scale" and "program" to generate the cultural ecology of a green space. Chicago's Humboldt Park community represents the perfect locale for our purposes in that it includes areas with affordable housing and a large central green space, but it also includes lots with deteriorating structures and very few green spaces within sub-communities. Given that our proposal addresses this community as a unique entity, our first step is to understand it through the data publicly available: demographics, crime statistics, and empty storefronts tell a limited, but immediate story of the community and its challenges. According to the US Census data, Humboldt Park has lost 3.8% of population whereas the City of Chicago gained 1.9% between 2010 and 2020. More than half of the population (52.9%) in Humboldt Park is Latino. The current median household income of the neighborhood is $46,785, an increase of nearly 30% from 2011 ($35,084). Also, 52% of employees in Humboldt Park drive alone to work, showing a high car dependency of the residents. The Humboldt Park community has less accessible park acreage (1.97) than the city average (2.42). This indicates that, despite the existence of the major central park, neighborhood and community parks are not accessible for Humboldt Park residents within 1 mile; thus there is actually a lack of distribution of "smaller" green spaces within a walking distance from residents.

More importantly, we found an unequal distribution of social capital between the West and East and North and South of Humboldt Park. Currently, the majority of commercial and cultural amenities, such as restaurants, cafés, and art galleries, are located on the North and East side of Humboldt Park near Logan Square. These areas also have more trees and green space. By contrast, urban decay, in which we found a high cluster

of crime hot spots and vacant lots and buildings, is significantly present in the South and West Side of the park. These areas also have a significantly lower more coverage of tree canopy. More importantly, we find that these metrics of spatial inequality correlate with physical and mental health; low-income residents living in the South and West of Humboldt Park tend to have a higher chance of having asthma, cancer, and mental health.

## A SOLUTION: SMALL-SCALE PUBLIC SPACES THAT EMPHASIZE COMMUNITY INTEGRATION

To avoid the pitfalls mentioned above, our solution is to create a web of small scale structures that includes redesigned, formerly underutilized spaces along with transportation opportunities within the community to facilitate movement between these spaces. By creating a web, we aspire to develop and support community relationships throughout the physical area (as opposed to re-locating community activities to one oasis within it), to work with existing structures rather than investing in a new, single structure, and thus, in turn, to create affordable, sustainable solutions that reflect and enhance the culture of the place. In this way, our solution keeps the community at the center of our proposal. Using Chicago's Humboldt Park as a site, we propose a series of prototypes of public space converted from neglected urban spaces, such as parking lots, vacant lots, boulevards, underpasses, and bus stops near park edges. Through a green network of streets and reclaimed lots, these




*Site Locations*
1 Abandoned Lot
2 Abandoned Building
3 Park entrance

Figure 2.*Proposed Neighborhood Green Network.*

***Proposed Neighborhood Green Network*** *comibines the existing neighborhood bike paths in Humboldt Park and extends them with a new network of designated non-vehicular / bike paths. This new network is tied together with cultural wayfinding elements that offer different program pieces in differnt locations- community information kiosk, sculpture, seating- in addition to bike maintenance stations. The extended green network interacts directly with designated neighborhood social sites*


Figure 3.*Proposed Neighborhood Network Site Axonometric.*

prototypes will enhance cultural use of the existing parks and boulevards on foot and bicycle, while providing programmatic spaces for social gathering, sports activities, and ecological urban landscape in response to proximate infrastructure, such as transit stations, parks, buildings, and bridges.

## PROCESS FOR IMPLEMENTATION: INVOLVING AND UNDERSTANDING THE COMMUNITY

Humboldt Park is empowered through several community organizations. These organizations are key to facilitating our ultimate planning. Surveying the community regarding its needs, understanding the data from their perspective, and articulating the cultural priorities that the community would like to support and enhance will all happen in concert with the community itself through these organizations. Understanding what constitutes an underutilized existing space may also emerge from these conversations as well as an understanding of what is needed within the community and where. Lots with dilapidated structures represent opportunities depending on the lot's availability and its potential as a small-scale creative space. Effective planning as to where best to include these spaces in Humboldt Park will ultimately emerge from its community members.

## PROCESS FOR IMPLEMENTATION: COMMUNITY, CULTURE, AND THE ARTS

Because our goals are to support and enhance rather than gentrify and replace, we will work with neighborhood organizations and schools to reinforce the identity of Humboldt Park through the arts, along with the spaces necessary for their creation. This process will create opportunities for community engagement through civic participation in designing and building

public spaces using the existing resources. We will commit to the establishment of multiple arts pieces and kiosks repurposing already structures or empty spaces that already exist in the community. These sculptures and kiosks, which could be designed and built by a community, would accommodate programs like bike repair, postings of community information, art activities, and small, informal meeting spaces with seating. These altered structures or outside areas will facilitate creativity and the reinforcement and development of the community's identity. Finally, West Humboldt Park has a rich history of hosting festivals honoring the community's unique history. We will work with the community to plan and develop temporary or permanent spaces to host these events in lots that are currently empty or underutilized.

## SUSTAINABILITY WITHIN THE COMMUNITY

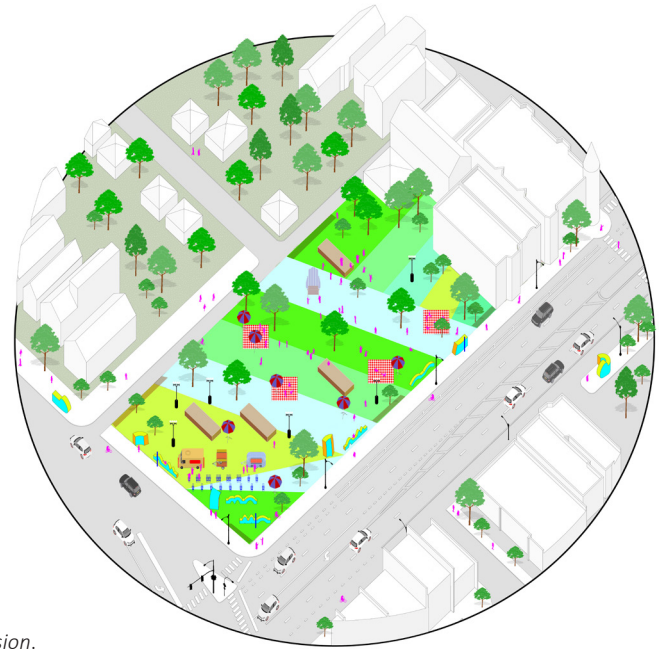
A web of new community-oriented spaces requires a small-scale, intentional transportation design that is currently absent from Humboldt Park. Using our socio-economic data, we propose design prototypes of multimodal and ecological social spaces that enhance walkability of the underutilized urban spaces and infrastructures. Small hubs would be located near the park itself, train or bus stations, potential festival areas, and other major amenities to facilitate bike and pedestrian traffic. Alongside art pieces and follies in various sizes, our design will integrate green infrastructure in the building and public ground, such as green roofs, bioswales, rain gardens, and permeable surfaces that could improve stormwater management and street landscapes in a neighborhood.

## TRANSPORTATION WITHIN THE COMMUNITY

A web of new community-oriented spaces requires a small-scale, intentional transportation design that is currently absent from Humboldt Park. Again, in conjunction with community organizations, we will design transportation hubs that facilitate bike and pedestrian traffic. Such hubs could offer bike repair, kiosks with community information, art, and small, informal meeting spaces with seating. Our previous project, Fresh Moves 2.0[2] had a similar vision at a low cost; we collaborated with a local artist and converted a decommissioned bus donated by the City of Chicago into a mobile food market. The bus routes focused on bringing fresh produce to food desert areas. Locally-grown vegatables and fruits were supplied by Growing Power, an urban agriculture organization located on the south side of Chicago.

## THE PORTABILITY OF THE CONCEPT

The ultimate goal of our project goes beyond Humboldt Park. Architecture and design have typically been too limited in scope to have the large-scale benefits that we would all like to see. An individual building can have a positive effect, but communities rarely revolve around one building. Instead, we propose that architects, city planners, politicians, and artists consider how structures relate to each other rather than how one building may or may not have an effect. Thus, we are proposing a more sustainable integrated process rather than a stand-alone blueprint. Financially, programs like Tax Increment Financing (TIF) or the city's ChiBlockBuilder[3] program could be used to create a public-private partnership with local organizations. City-owned or long-vacant land could be utilized for small-scale interventions.



*Design Elements*

1 Food Truck
2 Bioswale / Rain Garden
3 Flexible Stage
4 Information Kiosk Sculpture
5 New Trees / Plantings
6 New Street Lighting
7 Seating Sculpture
8 Bike Repair Station
9 Permeable Paving

Figure 4.*Abandoned Lot Conversion.*

***3 empty commercial lots** are cleared of debris, cleaned and painted colorfully. Large convertable seating elements are spread throughout the space for daily use. During festivals and social gatherings, elements are converted into a stage for musical performances; food trucks park in the space to provide local delicacies to the community celebration. The plaza surface is paved with water-permeable materials such as open-joint bricks. The mini park facilitates green infrastructure such as a rain garden and a bioswale to improve stormwater infiltration and mitigate heat islands.*

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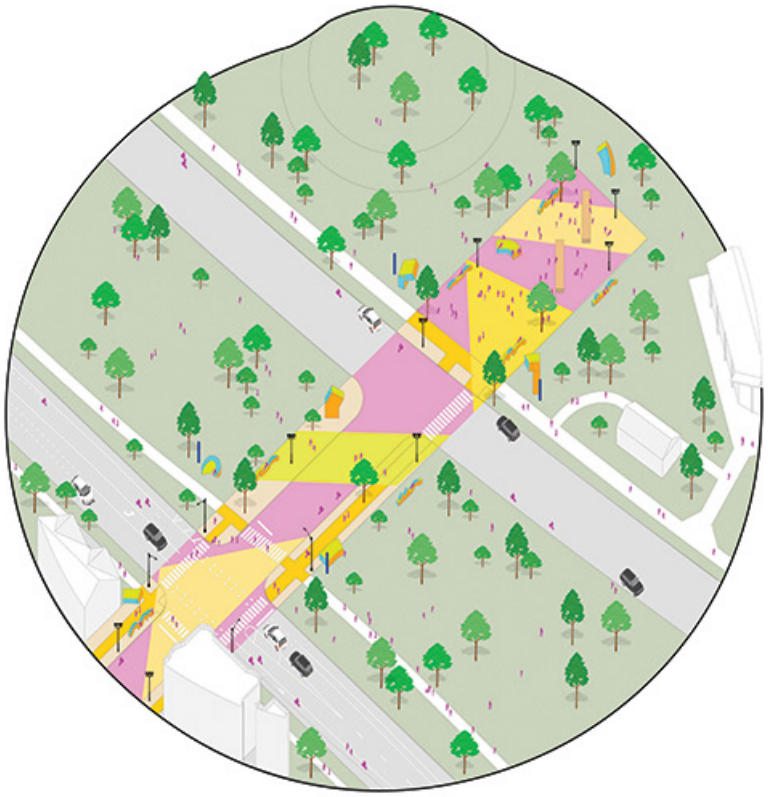
***An abandoned building*** *is converted into a community bodega , a resource center, & an indoor / outdoor gathering space. The bodega sells locally-grown produce and specialty items from local producers. The resource center offers a flexible space for lectures & classes, meetings, and social gatherings extended to the sidewalk with a parklet. The interior and exterior spaces intermingle during the warmer months to create a central neighborhood social space for all members of the community to enjoy.*

*Design Elements*

1 Parklet
2 Public Stoop Seating
3 Bodega / Local Food
4 Community Center
4 Information Kiosk Sculpture
5 New Trees / Plantings
6 New Street Lighting
8 Bike Repair Station
9 Green Roof

*Design Elements*

1 Grand Painted Entry
2 Bioswale / Rain Garden
4 Information Kiosk Sculpture
5 New Trees / Plantings
6 New Park Lighting
7 Seating Sculpture
8 Bike Repair Station
9 Permeable Paving / Painting



***A local park edge*** *is activated to engage with the adjacent neighborhood residents and provide an enticing, enlivening and social space to come and go from the public park. Vivid paint and multi-purpose follies (or art pieces) marks the path on the public way, and flexible public spaces allow neighbors and friends to lounge, chat, play, speak and relax with one another. The social link between residence and green space seeks to further make the park everyone's back yard.*

Figure 5.*Abandoned Building Conversion & Public Park Entrance.*

## ENDNOTES

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