

PHOTOGRAPHY IN THE URBAN RENEWAL TOOLKIT: THE CASE OF PRUITT-IGOE

Mike Christenson¹

¹North Dakota State University, Fargo, North Dakota

ABSTRACT: In this paper, I consider two approaches to the analysis of photographic practices carried out as part of the federally-funded Urban Renewal program. Using the case study of the Pruitt-Igoe housing project in St. Louis, Missouri, I map photographers' points of view and fields of view into a digital model to produce representations of the *space of photography*, and I map photographic fragments into a digital model to highlight photographers' biases and omissions. The work discussed here is characteristic of ways in which photographic practices were used in other cities engaged in the Urban Renewal program.

KEYWORDS: photography, Urban Renewal, Pruitt-Igoe

INTRODUCTION

As a topical subject for a case study in “the architecture of complexity,” few contemporary phenomena constitute as rich a field for inquiry as the federally-funded Urban Renewal program carried out in the United States largely in the latter half of the twentieth century. This program leveraged federal sponsorship to identify, study, and document “blighted” urban areas – i. e., districts and neighborhoods disproportionately inhabited by marginalized populations – and to clear those areas of existing buildings and people, allowing the properties to be resold or deeded to private developers. The deeply contested program, affecting as it did a constellation of diverse interests and populations (e. g., entrenched populations, racial and community identities, business interests, politicians, champions of historic preservation, etc.), was characteristically subject to complex, diverse and often contradictory practices of mapping, documentation, and propaganda.

As a specific case study condensing both the fleeting successes and the enduring failures of the Urban Renewal program, the Pruitt-Igoe project in St. Louis, Missouri, is at once one of the most recognizable icons of Modernism and Urban Renewal and – per Charles Jencks' oft-cited and controversial remark – the enduring image of Modernism's death.¹ Yet, as later research has convincingly shown, Pruitt-Igoe does not easily sustain reduction to iconic image, irrespective of deeply-held partisan desires to promote the project as representative of either the best or worst of Modernist design.² Its status as an icon notwithstanding, Pruitt-Igoe constitutes a highly charged case study for Urban Renewal research, due in no small part to the wide dissemination of photographic images of the project at various stages in its life.

1.0 THE SPACE OF PHOTOGRAPHY

1.1. Photography in the Urban Renewal program

Urban Renewal, as a federally-subsidized program in the United States, formally began with the passage of the Housing Act of 1937. The act effectively targeted for demolition those areas of cities which “by reason of dilapidation, overcrowding, faulty arrangement or design, lack of ventilation, light or sanitation facilities, or any combination of these factors, are detrimental to safety, health, or morals.”³ Until the 1949 Housing Act was passed, the responsibility for removing such areas belonged to municipalities; with its passage, federal help was made available to cities for the purchase and clearance of so-called “blighted” areas. The Housing Act of 1954 formalized the term “Urban Renewal” for the expanding program.

In pursuance of Urban Renewal goals, photography was an indispensable, constituent practice precisely because photographs could be selectively framed to highlight existing conditions and patterns of use, and to promote new possibilities for development; photography permitted “blighted” conditions to be foregrounded and brought to the attention of decision-makers. Conversely, opponents of the program mobilized photography to make a case for preservation of landmark buildings. As I have discussed elsewhere, such inherently selective approaches to photography could be used with respect either to individual buildings or to districts.⁴

Consistent with contemporary discourse, Pruitt-Igoe was a politically charged and contentious project existing at the intersection of racial segregation, government involvement in public housing, architectural design, and urban planning.⁵ Considered as a subject environment for this research, Pruitt-Igoe constitutes a deep and rich source of photographic

material. The project, completed in 1954, was formerly located north and west of downtown St. Louis in an area generally bounded on the north side by Cass Avenue, on the south side by Carr Street, on the west by Jefferson Avenue, and on the east by North 20th Street. Prior to the project's construction, this was a predominantly African-American neighborhood containing mixed-use buildings (e. g., two- and three-story multi-family apartments, single-family detached and semi-detached houses, retail, warehousing, and some light industrial structures). The neighborhood – with the notable exception of two churches – was almost completely razed in the early 1950s in order to make way for the Pruitt-Igoe project. Pruitt-Igoe was originally intended as a mixed-race project, although residents were kept racially segregated among the project's buildings. As is well documented, over a period of fifteen to twenty years, the Pruitt-Igoe project deteriorated and it was eventually demolished in the early 1970s. The site remains almost entirely vacant today.

Absent the promise of resolving the multiple, intertwined layers of politically charged questions surrounding the Pruitt-Igoe project, yet in the hope of finding ways to highlight and foreground those questions to the extent that they remain latent within a photographic record, this research specifically seeks to test the potential of new analytical tools upon old photographs. While the history of Pruitt-Igoe – including the history of the neighborhood prior to its construction, and the contemporary history of the project's site – constitutes a complex situation variously susceptible to analysis, this research is guided by the expectation that new technologies could potentially be brought to bear on that history.

Tactically, the work discussed in this research consists of two approaches. First, the points of view and fields of view of photographers within a defined urban environment are mapped into a model of Pruitt-Igoe to represent the *space of photography*, i. e., the collective space made visible through a set of photographs.⁴ When considered as representative of the collective behavior of photographers, a space of photography uniquely reveals biases, omissions, predilections, and intents. Secondly, sampled historical photographs are mapped into a digital model, enabling the construction of views from any arbitrary point within the environment, as well as to deconstruct biases inherent in individual photographs. In these ways, the latent capabilities and limitations of photography as a practice are foregrounded, and their relevance to the study of Pruitt-Igoe is newly examined.

1.2. Production of POV/FOV maps

Given one or more photographs of a subject site (i. e., a building, or an urban district), and a digital model of the site, the model can be populated with data registering the photographers' positions, fields of view and directions of view. The resulting three-dimensional dataset is specific to the photograph or photographs under consideration, and is here termed the *space of photography* of those photographs.

A space of photography can be made visible in several ways, of which the point-of-view/field-of-view map (or POV/FOV map) is perhaps the simplest (Figure 1). A POV/FOV map takes the form of a plan or a section, and together with conventional plan- or section-based annotations representing built features, also records photographers' points of view and fields of view.

Clearly, a given site can host an arbitrary number of spaces of photography, each corresponding to an individual photograph, or to groups or collections of photographs. Moreover, a given space of photography can register the *practices* of photographers. For example, given a specific building or site, a space of photography corresponding to a set of professional documentary photographs should be expected to differ from a space of photography corresponding to a set of photographs taken by tourists. Furthermore, a set of images resulting from an internet search (e. g., by means of Google or Flickr) should be expected to exhibit its own unique characteristics, with “popular” images arising earlier or more often in the search results.

1.3. Pruitt-Igoe and St. Stanislaus Kostka Church

Consider the Catholic church of St. Stanislaus Kostka located on the eastern edge of the Pruitt-Igoe site. The late nineteenth-century church was one of the few structures in the Pruitt-Igoe project area to escape the wholesale demolition of the neighborhood in the early 1950s. An online image search for photographs of St. Stanislaus returns several contemporary photographic images of the building (of which the first ten are mapped in Figure 1). Through the use of a simple digital model of the building, the photographs can be mapped into a space of photography to make the photographers' vantage points and fields of view apparent.

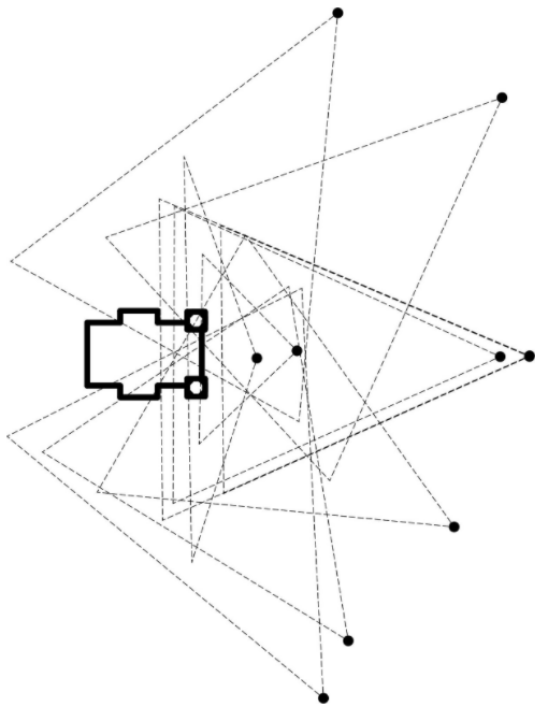


Figure 1: A point-of-view/field-of-view map of a Google-enabled space of photography, depicting the Catholic church of St. Stanislaus Kostka, St. Louis, Missouri.

This map (i. e., a POV/FOV map of a particular space of photography) reflects the inherent bias of the images resulting from the Google search: i. e., that photographs of the church from the east and south are more prevalent than photographs from other vantage points. Indeed, based only on the photographs available through a Google search, it would seem that photographs of the west side of the church are uninteresting, unpopular, or simply non-existent. The bias is simply explained by the fact that the contemporary condition of the site makes it difficult to take photographs of the west side of the church from any significant distance.

Historical photographs of St. Stanislaus are, in general, reflective of a different set of practices. When the building was photographed in the context of the Pruitt-Igoe project, evidence suggests that it was addressed either as a building marginalized from the photographer's focus of attention, perhaps important for establishing context, or for the purpose of establishing difference between what constituted the Pruitt-Igoe project and what did not; or as a kind of reference for locating or orienting a particular view of the project to a known and easily-distinguishable landmark structure. Again, a selection of historic photographs can be mapped into a space of photography to emphasize this point. Although the sample size as currently constituted is small, the initial mapping is suggestive: when St. Stanislaus was photographed within the context of the Pruitt-Igoe project, it was rarely identified as a focal point.

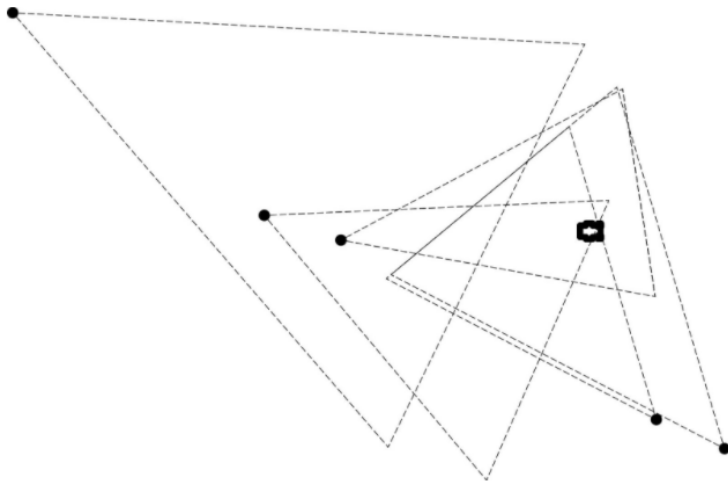


Figure 2: A point-of-view/field-of-view map of St. Stanislaus Kostka in the context of selected Pruitt-Igoe photographs.

A pair of photographs consistent with this interpretation is reproduced in Figure 3. The image on the left is a contemporary photograph of the church resulting from the Google search cited above, while the image on the right is a historical photograph of the Pruitt-Igoe complex within which St. Stanislaus (circled) can be observed.



Figure 3: At left, a contemporary photograph of St. Stanislaus Kostka church; at right, a historical photograph of Pruitt-Igoe with St. Stanislaus Kostka circled.

The photographic collections mapped in Figure 1 and Figure 2 are drawn from different times and contain radically different subject matter. Figure 1 illustrates the result of Google’s search algorithms, which clearly indicate a bias toward contemporary photographs of the publicly accessible sides of the church, and moreover, toward photographs which are centered on the church and tend to exclude other content. The collection in Figure 2 is a “curated” collection, selected from publicly available, digitized archival photographs of Pruitt-Igoe, on the basis of whether the church appeared in the image, even marginally.

The church itself is fundamentally unchanged over the timespan mapped in the two collections, and thus, at least insofar as the church building is concerned, the content as depicted in the photographic images is the same. However, the maps suggest profound differences in the practices of photographic representation. While Beatriz Colomina’s oft-cited remark concerning the potential of buildings to operate as mechanisms for producing images is relevant here, the remark’s implications with respect to prevailing practices of representation cannot be overlooked: although buildings necessarily operate as image-producing mechanisms, they do not do so in the absence of geographical, cultural, and political contexts.⁷

In particular, the comparison between the spaces of photography mapped in Figures 1 and 2 demonstrate two distinct ways in which such a space can function. First, a map of the space of photography can emphasize practices of photographers’ behavior, i. e., the difference between using photography as a practice of drawing attention as distinct from using it as a practice of marginalization. In contemporary practices, the church stands out as a landmark building

representing a tangible, documentable connection to a past state otherwise preserved only in records. By comparison, practices at the time of Pruitt-Igoe tend to treat the building marginally, admitting it to attention primarily for the reason of providing a counterpoint to the documentation of the then-new housing complex.

Secondly, the space of photography functions as a mechanism for disclosing practices of orientation. Seen in this way, the church constitutes a stable reference making it possible to ground the photographs across spans of time. The mechanism provided by St. Stanislaus in this way is exactly analogous to that provided by St. Bridget of Erin Church on the opposite corner of the Pruitt-Igoe complex (demolished in 2016), or the Gateway Arch on the Mississippi River in downtown St. Louis, both of which are visible in several historic photographs of the Pruitt-Igoe project.

1.4. Implications for the Study of Urban Renewal

As I have remarked elsewhere, photography is a set of politically charged practices implicating buildings' capacity to operate as mechanisms for producing images.⁷ The images "produced" by buildings are shown here not to be neutral with respect to photographic practices, i. e., in relation to the particular agendas and motivations of photographers. The implications of this work to future study of the Urban Renewal program are profound, insofar as photographs were key components of (a) local agency applications for federal funding to study and clear sites for renewal, and (b) preservationists' efforts to identify sites for protection against demolition.⁸ In other Urban Renewal projects, conditions as documented through photography have been shown to be neither typical nor representative of as-built conditions.⁹ The method for producing POV/FOV maps is therefore a potentially important component of the future study of such situations.

2.0. MAPPING PHOTOGRAPHS INTO DIGITAL SPACE

2.1. Pruitt-Igoe Opening Day

Mapping photographic images into a three-dimensional digital model makes it possible to view those images from arbitrary angles, in particular from simulated vantage points external to the associated spaces of photography. Stated differently, when mapped into a three-dimensional model, a photographic image can be displayed in three-dimensional space together with a diagrammatic representation of the image's point of view and field of view. This ability has the apparent effect of disassociating the pixel-based content of a photograph from the locus of the original photographer's practice.

Figure 4 reproduces a photograph taken on the opening day of the Pruitt-Igoe project, with a large crowd in seated and standing positions, occupying a grade-level plaza along Dickson Street. Three newly-completed Pruitt-Igoe buildings are visible behind the crowd, and St. Stanislaus Church is just visible at the left margin of the photograph.



Figure 4: Photograph taken on opening day, Pruitt-Igoe project.

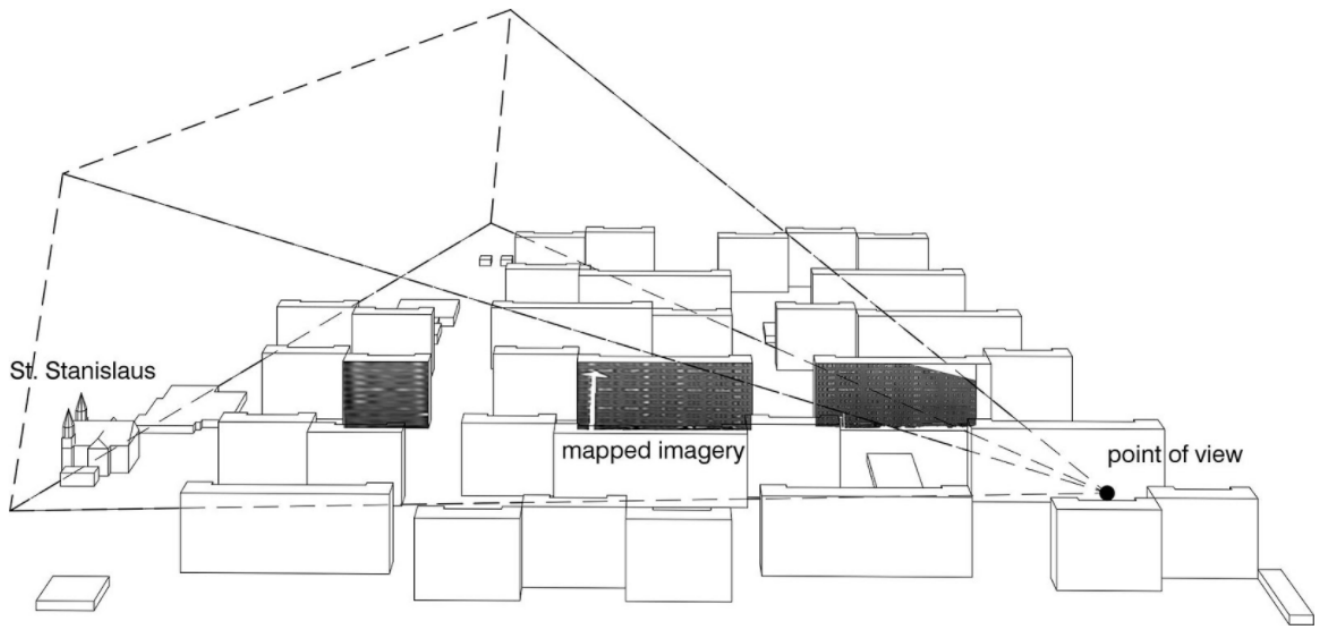


Figure 5: Photographic imagery from Figure 4 mapped into a three-dimensional digital model of the Pruitt-Igoe project, diagramming the photograph's point of view and field of view. St. Stanislaus church is at left.

Figure 5 shows that the photograph's content is in some sense typical of the imagery made possible by the construction of the Pruitt-Igoe project, all but three buildings of which are not present in the photograph. Furthermore, the marginal presence of St. Stanislaus Church, on the eastern edge of the Pruitt-Igoe project, functions as an orientation device as discussed in this paper's previous section. Arguably, photographs such as the one reproduced as Figure 4 served an important function in the marketing and promotion of Pruitt-Igoe, emphasizing the project's apparently eager clientele in the context of modern, "purist" architectural design. (Although not considered in detail here, later photographs of the project served a similar function with regard to the deterioration and vandalism experienced by the project in the years prior to its demolition.)

2.2. Photograph of Mixed-Use Buildings at Jefferson-Biddle

Consider a historic photograph of a neighborhood store with apartments above, on the southeast corner of Jefferson Avenue and Biddle Street, along the western edge of the Pruitt-Igoe site (Figure 6). The buildings in this photograph were demolished to make way for the Pruitt-Igoe project. The photograph was taken by renowned St. Louis photographer Arthur Witman, and is one of several photographs taken of the demolition of buildings in the area.



Figure 6: Historic photograph of mixed-use buildings at the corner of Jefferson and Biddle.

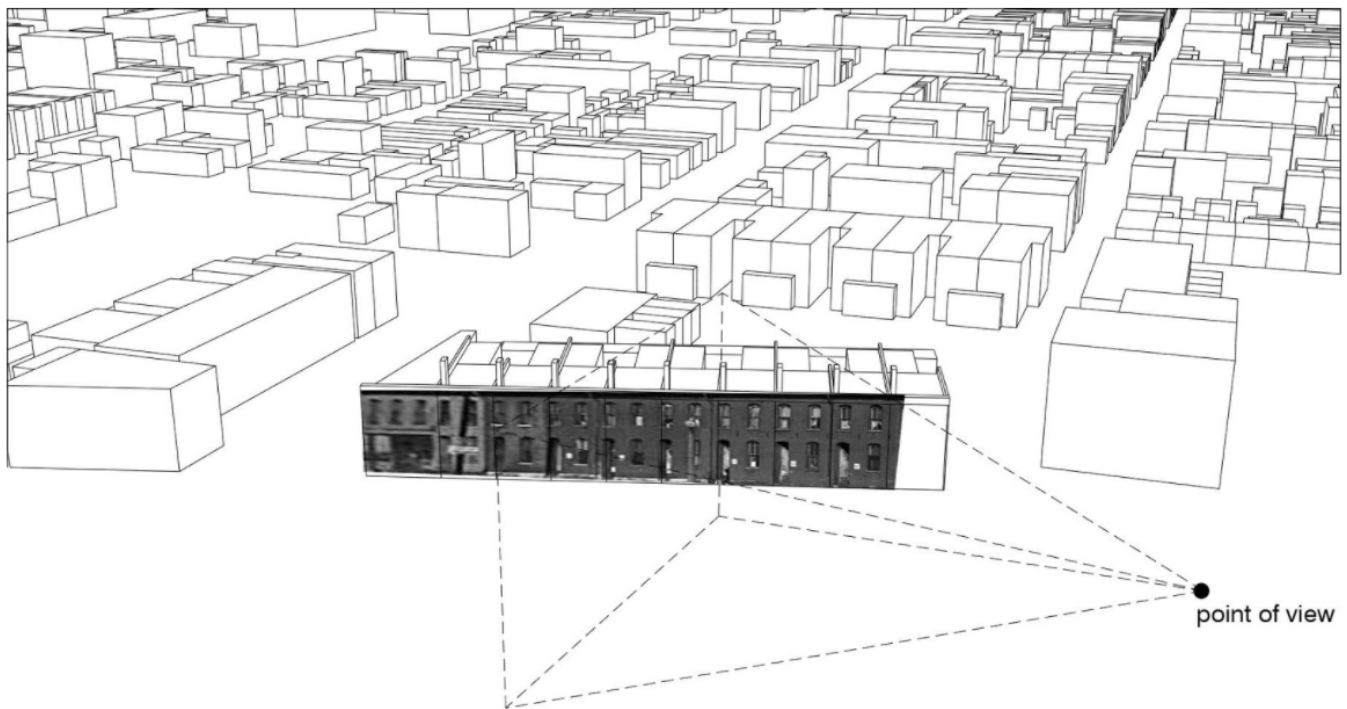


Figure 7: Photographic imagery from Figure 6 mapped into a three-dimensional digital model of the pre-Pruitt-Igoe neighborhood in St. Louis, diagramming the photograph's point of view and field of view. .

Sampled imagery from the historic photograph is mapped into a three-dimensional digital model depicting the neighborhood demolished to make way for Pruitt-Igoe, and the photographer's point of view and field of view are diagrammed within the model (Figure 7). The diagrammatic representation of Witman's point of view and field of view suggests he was positioned on the opposite side of Jefferson Avenue, outside of the boundaries of what was to become the Pruitt-Igoe site. The surfaces documented in his photograph conceal a *hidden depth* which the model makes clear: this is not simply the depth of the buildings directly photographed but the depth of the extended neighborhood behind the buildings.

On first inspection, photographs such as the one reproduced as Figure 6 are useful to the study of Urban Renewal simply because they provide a kind of documentary record of historic buildings. But the possibility of mapping such photographs into a digital model, as shown in Figure 7, extends the usefulness of the photographs into a realm of speculation – why, for example, was a specific point of view chosen, rather than other apparently possible viewpoints? In mapping photographs into models, we are better equipped to ask about a photographer's conscious or unconscious biases: was a photographer acting under his or her own discretion, or in pursuit of someone else's agenda? What was excluded, what was highlighted, what was concealed? While more work is required to explore these questions in depth, the research shows promise, as it begins to outline a method for opening up historic photographs to a new discussion of latent motivations and biases.

2.3. Summary

Digitally modeling a space of photography in three dimensions, whether the space is associated with a specific photograph, or with a collection of photographs, constitutes a representation of the space significantly distinct from a map-based representation as discussed in this paper's first section. The digital modeling of the space of photography suggests new avenues for disclosing bias present in single photographs or collections of photographs, specifically insofar as the model makes it possible to visualize how specifically-framed photographic subject matter relates to its immediate and distant context.

3.0. FUTURE WORK

This work is proceeding on several fronts. Additional online photographs from several archival sources are being assessed as candidate members of a large image set for purposes of visualization and analysis. Where appropriate to the investigation, large-scale reproductions of selected photographs may be requested from sources. Additionally, the digital model of the Pruitt-Igoe site continues to be refined with additional detail and metadata. These two efforts (photograph assessment and model refinement) are complementary: even as photographs are mapped into the model,

the detail in the model is being refined in response, enabling future work to be carried out with greater accuracy.

In the broadest sense, this work contributes to the larger project of *architectural epistemology*, i. e., the study of how information about architecture is produced, structured and disseminated. The project is a primary motivator for an upcoming monograph, in which the Pruitt-Igoe project will be discussed at length alongside other illustrative examples.

CONCLUSION

Although the work described here is purposefully narrow in scope, focusing on questions which are susceptible to digital modeling, photographic compositing, and spatial geometry, it has clear implications in other areas. In particular, the work is potentially relevant to – but does not yet explore in depth – issues of racial identity and segregation, government involvement in public housing policy, and the persistence of culturally significant practices and constructs. Pruitt-Igoe's rich history condenses political and governmental issues, as well as questions of race and segregation, and any serious effort to explore this history from an architectural perspective will benefit from an expanded toolset.

Yet, despite its purposefully narrow scope, the work described in this paper supports the larger contention that photography, taken as a whole, is a politically charged set of practices with implications and repercussions across many realms. For example, as I have discussed elsewhere, photography is complicit in the canonization of buildings, as suggested by Charles Jencks' well-known use of photographs depicting the demolition of Pruitt-Igoe." In its wider applicability, the research could be brought to bear upon the criteria used by the federal Urban Renewal Agency to approve local and state requests for funding the clearance of urban areas targeted for redevelopment. In particular, as local and state agencies worked to demonstrate the existence of "blight" to the satisfaction of federal authorities, as a precondition to receiving federal funding, photographs played a central role and were used strategically to emphasize a renewal area's "worst" conditions."

In summary, this research aims to provide a tool for identifying potential biases within photographs, which necessarily constituted a small though significant factor within the constellation of forces comprising the Urban Renewal program. Even as its own historical power to frame content and to orient interpretations is diminished through the use of digital models allowing the production of images from arbitrary viewpoints, photography and photographs are shown here to be susceptible to analytical methods brought about by new technologies and toolsets. In this way, photography's relevance extends beyond the purposes and motivations of its originators.

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ENDNOTES

1 Jencks' remark, published in several editions of his seminal book originally titled *The Language of Post-modern Architecture*, is as follows: "Modern Architecture died in St. Louis, Missouri on July 15, 1972 at 3:32 p. m. (or thereabouts) when the infamous Pruitt-Igoe scheme, or rather several of its slab blocks, were given the final coup de grace by dynamite ... Boom, boom, boom." Charles Jencks, *The Language of Post-Modern Architecture* (New York: Rizzoli, 1977), 9.

2 See Katharine G. Bristol, "The Pruitt-Igoe Myth," *Journal of Architectural Education* 44, no. 3 (1991).

3 See "United States Housing Act of 1937, as Amended (September 1939)," Internet Archive, <https://archive.org/details/Housingact1937>.

4 See Mike Christenson, "Research Notes: The Photographic Construction of Urban Renewal in Fargo, North Dakota," *Buildings & Landscapes* 23, no. 2 (2016): 116-128.

5 See, for example, Bristol, "The Pruitt-Igoe Myth," as well as Elizabeth Birmingham, "Reframing the Ruins: Pruitt-Igoe, Structural Racism, and African American Rhetoric as a Space for Cultural Critique," *Western Journal of Communication* 63, no. 3 (1999), and Oscar Newman, *Defensible Space: Crime Prevention Through Urban Design*. New York: Macmillan, 1972..

6 See Mike Christenson, "On the Architectural Structure of Photographic Space," *Architectural Science Review* 54, no. 2 (2011): 93-100.

7 Colomina writes that buildings are "not simply represented in images but [are] mechanism[s] for producing images." See Beatriz Colomina, "Mies Not," in *The Presence of Mies*, ed. Detlef Mertins (New York: Princeton Architectural Press, 2004), 214.

8 See Christenson, "Research Notes."

9 See, for example, Richard Cahan, *They All Fall Down: Richard Nickel's Struggle to Save America's Architecture* (Washington, D.C.: Preservation Press, National Trust for Historic Preservation, 1994); or *With Heritage So Rich: A Report of a Special Committee on Historic Preservation* (New York: Random House, 1966) – a seminal and influential document in the development of the historic preservation movement, one that relies extensively on photography and that was published in the year of passage of the National Historic Preservation Act.

10 See, for example, Francesca Russello Ammon, "Commemoration amid Criticism: The Mixed Legacy of Urban Renewal in Southwest Washington, D.C.," *Journal of Planning History* 8, no. 3 (2009): 175-220. Ammon writes: "As in many clearance projects, select photographs of particularly dilapidated sites helped cement a picture of the neighborhood that ignored the presence of other, unpictured, sound, and well-maintained structures" (213).

11 See Mike Christenson, "Critical Dimensions in Architectural Photography: Contributions to Architectural Knowledge," *Architecture_* MPS 11, no. 2 (2017).

12 See Christenson, "Research Notes."