

RAE2026

Boat People Housing Culture: an in-depth case study of Tai O Village

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Boat People Housing Culture: an in-depth case study of Tai O Village

Descriptor

Building on three pilot studies conducted from 2017–2020, this 3-year funded study (GRF 15600621, HK\$888,662, 2021–2024) examines the socio-spatial evolution of Tai O, a historic peri-urban settlement on Lantau Island, Hong Kong. Settled in 1632, Tai O is distinguished by its densely packed ‘stilt houses’. Over the years, ‘boat people’ living here have experienced colonial-era geopolitical shifts that have altered policy rhetoric oriented towards Tai O and similar settlements, transitioning from ‘slums to be cleared’ to contemporary calls to ‘conserve its cultural heritage’. Positioned between architectural and urban studies, and between political geography and sociology, this research draws upon Lefebvre’s *The Urban Revolution* to understand legacy settlements in the context of global urbanisation; Turner’s examination and explication of informal settlements; and Anderson’s studies of boat people. The findings demonstrate Tai O’s evolving relationship to its geopolitical context, advancing research on stilt housing morphology and spatial practices, boat people’s socio-spatial practices and comparisons with other settlement patterns. They also illuminate how Tai O residents negotiate, conserve and manage the village’s cultural assets throughout developmental changes. The research methods included an extensive literature and archival review, a novel physical survey using 3D scanning and ethnographic studies that recorded stilt house residents’ oral histories. The research was disseminated through lectures, exhibitions, academic papers and community engagements. The findings elucidate the distinctive physical interconnections, customary spatial sharing and interhousehold negotiations that distinguish stilt housing; how toleration, solidarity, household autonomy and social codependence are highly valued by stilt house inhabitants, who connect these values to stilt housing conditions; the evolution of spatial sharing practices distinct from the formalised and spatially delineated context of late capitalist land-use planning; and knowledge exchange and engagement within Tai O’s resident community, which has mobilised the identification of and advocacy for its cultural assets.

Personal Profile: **Associate Professor Daniel Keith Elkin**



Associate Professor Daniel Elkin's research examines how social structures and practices interact with physical environments, adopting a historical-structural and geopolitical perspective to understand how socio-spatial environments coevolve. He takes a particular interest in housing and urban development through architectural and sociological studies, contributing to research with his expertise in digital physical surveying, ethnography, and quantitative and qualitative analysis applied to socio-spatial theories and practices. Elkin was the principal investigator in the Hong Kong 'Housing and social ethnography project', which included a General Research Fund (GRF)-funded 3-year collaboration between the PolyU School of Design (SD) and the Department of Applied Social Sciences (APSS). He led the project's methodological development, implementation and dissemination for work in Tai O (see multi-component output (MCO) 1) as well as comparative multimarket survey and in-depth pilot research in Kowloon City and Cheung Sha Wan (MCO 2). Educated as an architect, Elkin began his academic research career at PolyU in 2016 conducting applied research in digital fabrication. Working in Hong Kong stimulated his interests in housing, sociology, anthropology and the relationships between spatial and social phenomena. He is a tenured research faculty member, received the 2021 PolyU Young Innovative Research Award and received a 2020 Smart50 Award for public data collection in Tai O Village.

Research Questions

1. What impact has the changing geopolitical context around Tai O Village had on the village and on stilt housing in terms of its development, administration and management?
2. What physical/architectural conditions and spatial usage right conditions distinguish stilt housing from other housing patterns?
3. Do boat people have a distinct socio-spatial theory?
 - Do historical and contemporary sources suggest that boat people have a distinct 'social theory' (i.e. a set of ideas about how people should relate to each other and what people should value)?
 - Does that social theory connect to or impact physical space and spatial usage practices to become a socio-spatial theory of stilt housing?
4. What differentiates stilt house residents' socio-spatial theory from its surrounding context?
5. What steps have Tai O Villagers and stilt house residents taken to negotiate developmental change and maintain or reproduce their cultural assets?

Research Outputs

- **Conference Papers**

- 'Persistent Informality and Cultural Heritage: Stilt Housing in Tai O Village.' The 11th East Asian Conference in Alternative Geography (EARCAG), 2025. [PIRA Link](#).
- 'Digital Cultural Heritage Conservation: Sampling Stilt Houses in Tai O Village.' International Association of Societies of Design Research Congress 2023: Life-Changing Design, 2023. <https://doi.org/10.21606/iasdr.2023.212>
- 'Digital Conservation in Tai O Village: Point Cloud Space and Architecture Conservation Legibility.' 9th International Conference on New Trends in Architecture and Interior Design: 9th ICNTAD '23, 2023. [PIRA Link](#).
- 'Situated Knowledge Utility and Emergence in Tai O Village: A Living Lab in the Back-Loop of COVID-19.' International Social Innovation Research Conference 2021: Enabling the Change! Social innovation and Enterprises for a Better Future, 2021. [PIRA Link](#).

- **Book Chapters**

- 'Alignments of Architecture and Commoning in Tai O Village: Architecture Critique and Fields of Adversity.' 2020. Design Commons. Springer. https://doi.org/10.1007/978-3-030-95057-6_5

- **Visual Materials**

- Point Cloud datasets: '3D LiDAR and Photogrammetry Scans of a Stilt House in Tai O Village – 2022 – Case' [20 Case numbers, 023157-941756]. ([Links available on later slides.](#))
- Oral History Transcript datasets: 'Ethnographic Interview Transcripts from Interviews with Residents of a Stilt House in Tai O Village – 2022' [20 Case numbers, 023157-941756]. ([Links available on later slides.](#))

Research Field & Key References

- **Field 1: Urban studies concern the development of the built environment as a physical and social phenomenon.**
- **Two ideas from this field serve as a theoretical departure point for this MCO:**
 - From LeFebvre: Urbanisation is historical, global and socially ubiquitous.
 - From LeFebvre: Researchers must understand peri-urban settlements (such as Tai O) through their historical, socio-structural relationship to their surroundings.
 - Research in this MCO departs from this perspective by gathering literature that contextualises contemporary stilt housing through its history.
- **Field 2: Housing research on informal settlements concerns how people house themselves without normative permitting and planning.**
- **This MCO builds upon four ideas from this field:**
 - From John FC Turner: Housing is a thing people do in response to multiple needs, not just the need for physical shelter.
 - From Turner: Housing autonomy, the freedom to specify or choose housing, facilitates the best housing outcomes.
 - Research in this MCO departs from Turner's ideas by studying physical and nonphysical housing conditions in a unique survey area.
 - From Alan Smart and Lawrence Lai: Hong Kongese informal settlement conditions are determined by the region's history.
 - From Smart and Lai: Hong Kongese governments have managed informality differently over time.
 - Research in this MCO departs from this perspective by detailing inhabitants' historical and contemporary circumstances in an informal settlement.

Research Field & Key References

- **Field 3: Research on boat people, Tai O Village and stilt housing concerns the specific subculture of people who live and work on water in Hong Kong, their settlements and their transitional stilt housing practices.**
- **This MCO builds on seven ideas from this field.**
 - From Eugene Anderson and Hiroaki Kani: Boat people were a Cantonese subculture that lived on water.
 - From Anderson and Kani: Their culture was like land-dwellers' but differentiated by habitation patterns and an accompanying distinct social theory.
 - Research in this MCO builds on their work with a detailed ethnography of boat people that combines physical surveying and social analysis.
 - From Allen Chun: Land tenure reform in colonial Hong Kong (HK) followed a lineage village model, which excluded boat people.
 - Research in this MCO relies on Chun's work to explore how HK governments managed boat people's habitation practices.
 - From Kuah & Liu: Contemporary HK government attitudes towards Tai O are ambiguous and opportunistically motivated by regional competition.
- Research in this MCO builds on this idea by exploring how this context affects stilt house inhabitants, especially when tourism development in Tai O intensifies.
- From Gary Yeung: Stilt housing evolved from boat people's transitional housing practices into a coherent architectural typology.
- From Yeung: Stilt houses coevolved with boat people's socioeconomic development in littoral zones.
- Research in this MCO builds on Yeung's work with a detailed physical survey of stilt houses in 2021–22 and complements his recent work on littoral habitation.
- From Wong Wai King: Stilt housing connects to boat people's fishing culture extending back to the 1600s.
- Research in this MCO builds on King's local anthropology with a detailed scientific record of physical stilt house conditions and accompanying oral histories.

Research Methods, Prototypes & Materials

Notes on Multi-Component Output (MCO) Structure

- Our work in Tai O Village involved research in two phases.

Pilot Projects Phase

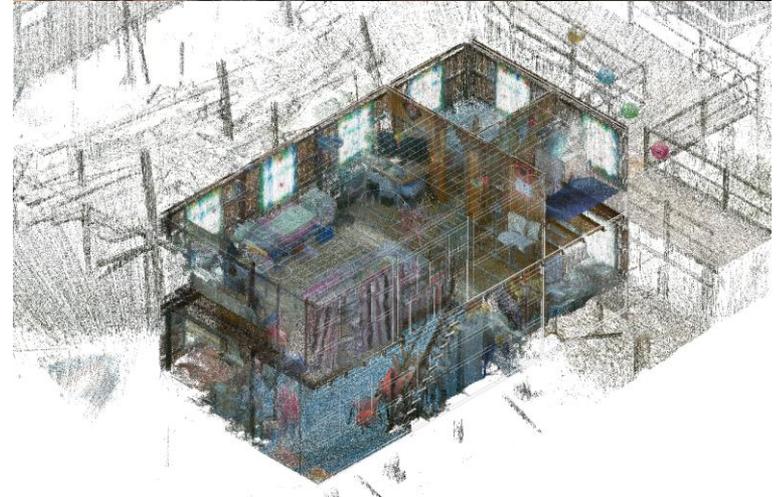
- 2017–2020.
- Slides/pages 11–15.
- Research evaluated in Research Assessment Exercise (RAE) 2020.
- Through this work researchers developed connections and groundwork necessary for the GRF-funded project phase.

GRF-Funded Project Phase – RAE 2026

- 2021–2024.
- Slides/pages 16–37.
- Current research contributing to most recent publications.

Top: A prototyping project typical of the pilot projects phase

Bottom: A 3D scan of a stilt house from the GRF-funded project phase



Research Methods, Prototypes & Materials

Notes on Multi-Component Output (MCO) Structure (Continued)

- This MCO is comprised of research on pages 16-37.
- This includes stilt house digital surveying workflows and 20 datasets that include digital scans of stilt houses, shown on page 20;
- Oral history interviews and documents that include 20 transcripts of ethnographic interviews, shown on page 21;
- And drawings, analytical diagrams, and exhibition materials that include 20 posters of drawings, diagrams, and text, shown on pages 26-28.
- Research findings from these MCO contents are summarized on pages 28-35.

Top: Dr. Chi-Yuen Leung interviewing a stilt house resident during the GRF-Funded Project.

Bottom: a 3D scan of stilt house from the GRF-Funded Project Phase

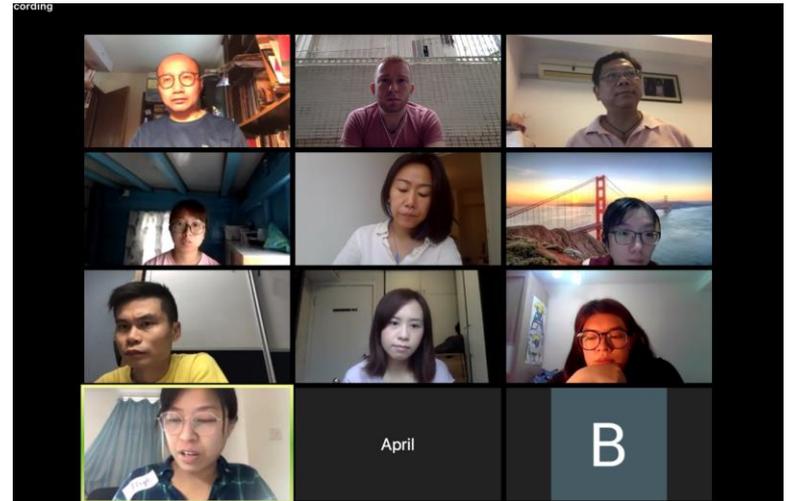


Research Methods, Prototypes & Materials

Section 1: Pilot Studies 2017–2020

- Research began just as COVID emerged in 2019.
- Dr. Chi-Yuen Leung connected with personal contacts at the Tai O YWCA, which became our field liaison organization (2019–2024).
- Leslie Ho, YWCA project leader, connected us to stakeholders in Tai O.
- To learn about the SLB’s effects, we held three focus groups on one topic each: tourism development, transportation and community projects in Tai O.
- We summarised focus group findings and returned them to participants for their feedback.

Top: A screenshot of one of the online focus groups.



Bottom: Results from the accompanying Google Forms survey.

47. 以下做法是否能幫助你融入大澳的旅遊發展規劃？請別選相應方格。

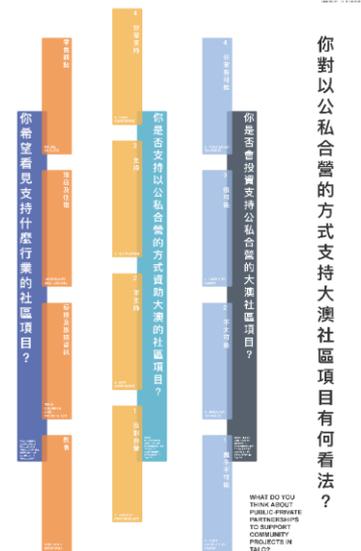
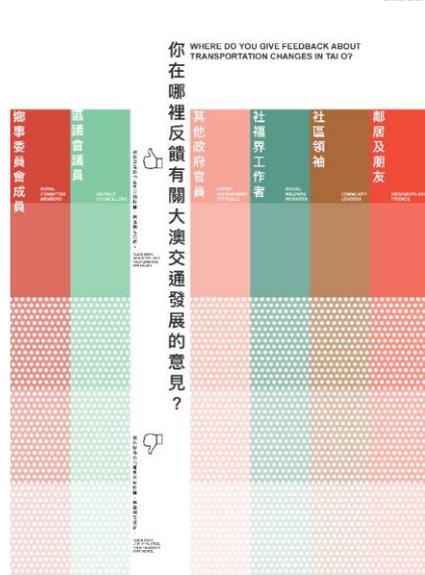
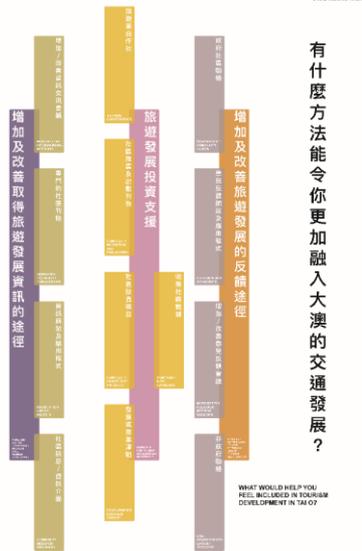
Please check whether you think the following would be very helpful, helpful, or not helpful for inclusion in tourism development planning for Tai O.

很有幫助 Very Helpful	有幫助 Helpful	沒有幫助 Not Helpful	
<input type="checkbox"/>	<input checked="" type="checkbox"/> x 2	<input type="checkbox"/>	提供更多旅遊發展規劃決策的資訊。 Better information on tourism development planning decisions.
<input type="checkbox"/>	<input checked="" type="checkbox"/> x 2	<input type="checkbox"/>	就旅遊發展規劃提供更好的反饋途徑。 Better ways to give feedback about tourism development planning.
<input checked="" type="checkbox"/> x 1	<input checked="" type="checkbox"/> x 1	<input type="checkbox"/>	由社區組織倡導旅遊發展規劃。 Community organizations to advocate for tourism development planning changes.
<input type="checkbox"/>	<input checked="" type="checkbox"/> x 2	<input type="checkbox"/>	就旅遊交通狀況提供更多資訊，如訪客流量、訪客數據之收集與發放、以及季節性趨勢。 Better information on tourism traffic, like transit ridership information, visitor data collection and distribution, and seasonal trends
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	其他（請填上你的想法） Other (Please fill in your ideas.)

Research Outcomes, Findings & Further Research

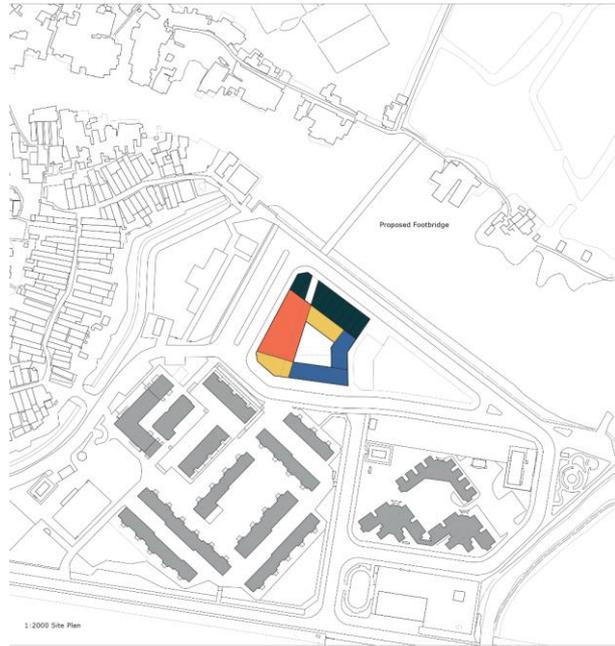
Pilot Project Outcomes

- A. Public feedback session collateral (9 bilingual posters, unused because of the onset of COVID-19).

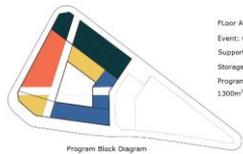


A

Research Outcomes, Findings & Further Research



Peripheral (A) Event Support Storage

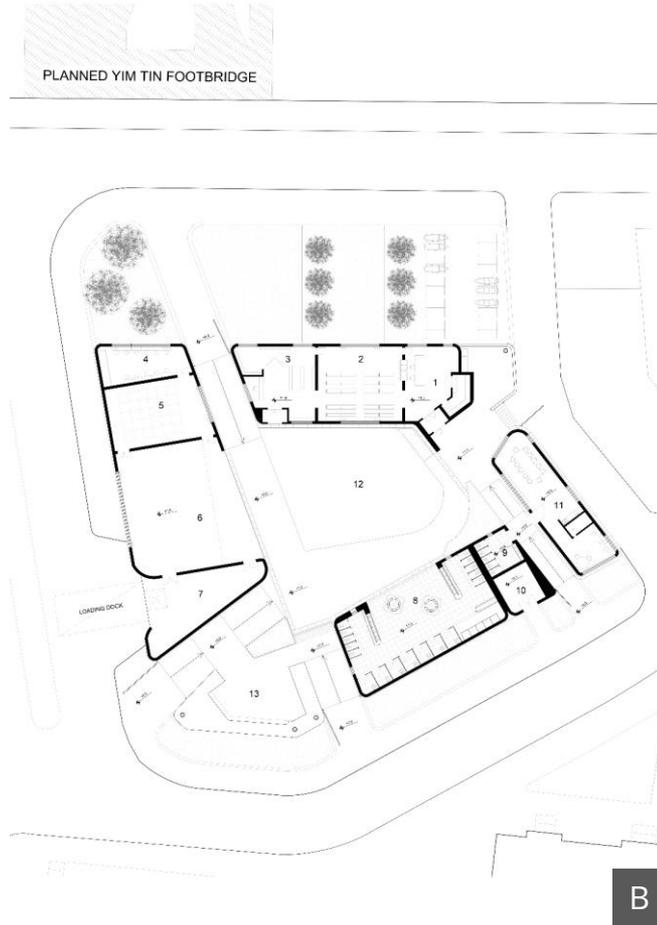


Floor Area of Program Block
 Event: 628m²
 Support: 332m²
 Storage: 340m²
 Program Block Total
 1300m²



Outdoor Area
 335m²
 Circulation Path Area
 560m²

16 **A**



Pilot Project Outcomes

- A. Site documentation, precedent study and schematic planning for 3 alternative schemes for the Yim Tin Event Space...
- B. ...including further development of 1 scheme into an outdoor event space, tourism education facility and Rural Committee office and meeting room.

Research Outcomes, Findings & Further Research

Pilot Project Findings

- RQ1: What impact has the changing geopolitical context around Tai O Village had on the village and on stilt housing in terms of its development, administration and management?
- RQ5: What steps have Tai O Villagers and stilt house residents taken to negotiate developmental change and maintain or reproduce their cultural assets?
- Active stakeholders in Tai O noted in 2019 that tourism development was increasing, as was traffic on transportation and pedestrian paths.
- They voiced interest in initiatives that would help them understand and respond to these changes.
- Stakeholders and local administrators supported a pedestrian traffic monitoring project in Tai O.
- The project's findings supported stakeholders' observations: Pedestrian traffic in Tai O increased on weekends and public holidays, which may have been tourism related.
- Stakeholders and local administrators provisionally supported design initiatives meant to address increase tourism development in Tai O Village.
- These initiatives, however, did not move forward:
 - Our proposal to renovate Tai O's museum was reviewed in the 2022 Lantau Conservation Fund (LCF) final round.
 - It was not funded because the museum building's ownership was unclear, and the Rural Committee did not provide written support.
 - The CEDD did not review our Yim Tin Event Space scheme, stating that the CEDD scheme was already under planning review.

Research Outcomes, Findings & Further Research

Further Research: Transition to the General Research Fund (GRF)-Funded Project

- The pilot projects followed a social innovation activist research model.
- They failed to affect building- or urban-scale change.
- However, they familiarised our team with Tai O Village and with stilt houses.
- Stilt houses are threatened: These densely built, light wooden structures are vulnerable to fires, typhoons and flooding.
- We worked to secure a GRF grant directed towards more sustainable pure research on stilt housing.
- The local museum renovation project could potentially still find support from the LCF.

Top: A stilt house under construction in 2021.

Bottom: A stilt house that burned down in the same year.



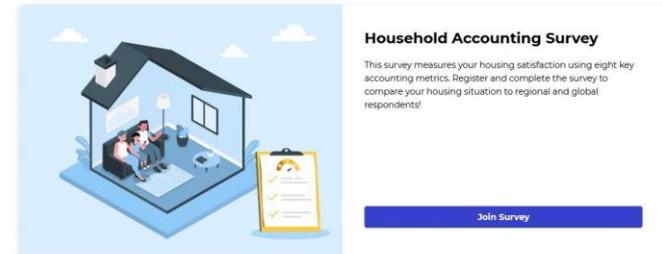
Research Methods, Prototypes & Materials

Section 2: GRF Project, 2021–2024

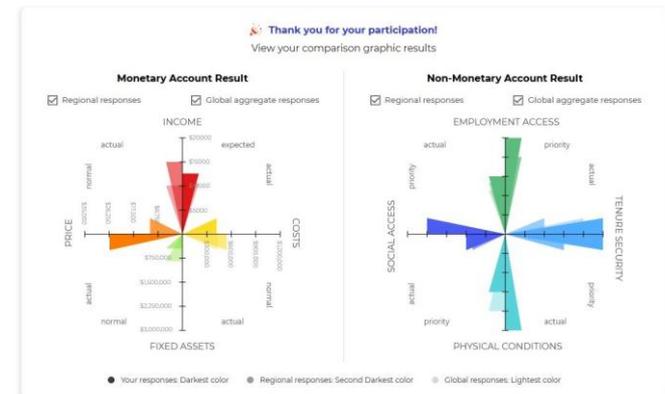
- Why stilt houses in Tai O?
- Turner’s books *Housing by People* and *Freedom to Build* changed Elkin’s research direction.
- He increasingly explored questions about housing, especially in relation to Turner’s theses:
 - That housing is a process guided by multiple decision-making factors.
 - And that autonomy in housing specification/choice delivers the best housing outcomes.
- He developed homewise.design (now inactive) to gather and visualise housing data using Turner’s ‘Household Accounting Survey’.

Top: Homewise.design original entry page.

Bottom: Homewise.design sample result showing a user’s data in one of Turner’s Household Accounting ‘kite’ diagrams.



John F.C. Turner developed the Household Accounting Survey to measure housing suitability. You can find his original writing on the System in Housing by People: Towards Autonomy in Building Environments, published by [Marion Boyars Publishers](#). This project is supported by [The Hong Kong Polytechnic University School of Design](#). [How is my data used?](#)



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Research Methods, Prototypes & Materials

Section 2: GRF Project, 2021–2024

- Elkin met Wong Wai King and read her book *Tai O: Love Stories of the Fishing Village*, and he also read Gary Yeung's articles on stilt housing.
- Stilt housing offered a site to investigate Turner's ideas in Hong Kong.
- Stilt housing is a diverse, longstanding typology.
- Hypothetically, stilt house dwellers fine-tune their housing to meet diverse needs over time.
- It is an unpermitted development pattern.
- Hypothetically, stilt house dwellers have or had real autonomy in specifying their housing, within some limits.

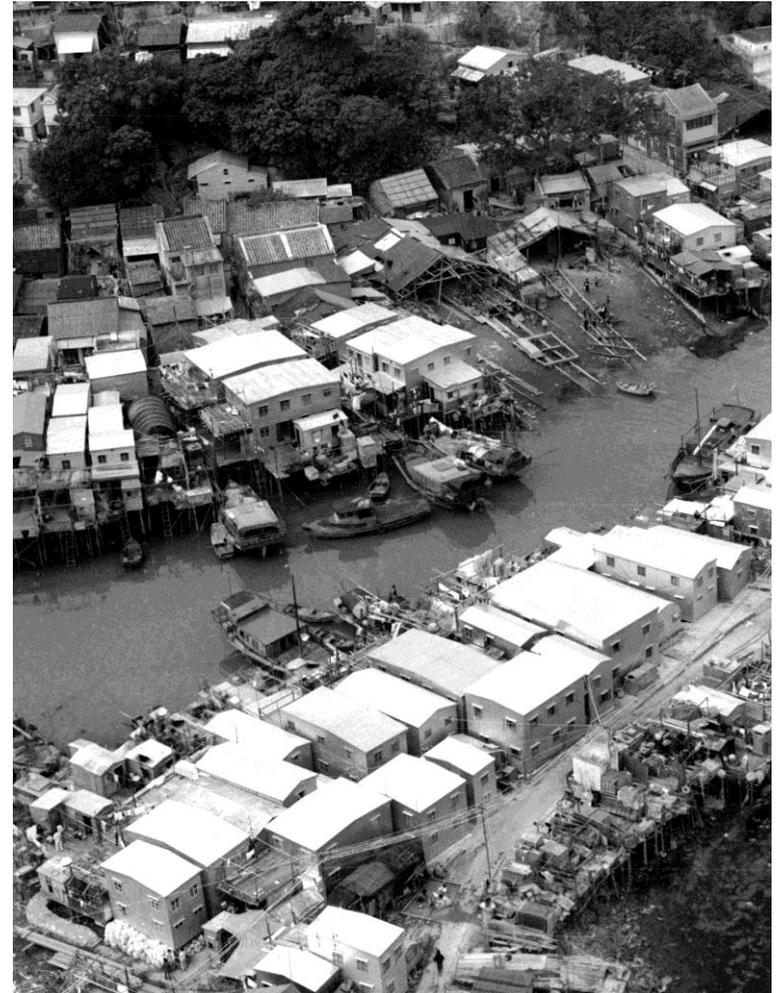


Image: An aerial view of stilt houses in Tai O from the 1970s. Courtesy of the HK Government Information Services Department.

Research Methods, Prototypes & Materials

Section 2: GRF Project, 2021–2024

- To explore Turner’s ideas in a stilt housing context, the GRF-funded study proposed two kinds of data collection:
- A physical survey, using digital 3D environment scanning, and a Household Accounts survey, following Turner’s design.
- The GRF proposal secured PolyU Human Subjects Ethics Clearance and was funded HK\$888,662 from 2021–2024.
- Stilt house sampling followed a purposive snowball method.
- Leslie Ho from the YWCA helped secure dweller participation.
- Stilt house occupants, often elderly or illiterate, did not respond well to our Household Accounting survey.
- Instead, we conducted long-format (40+ min) ethnographic interviews with 1 or more occupant in each house (n = 20 households, 24 informants).

Top and Bottom: Dr. Chi-Yuen Leung with stilt house residents in Tai O Village.



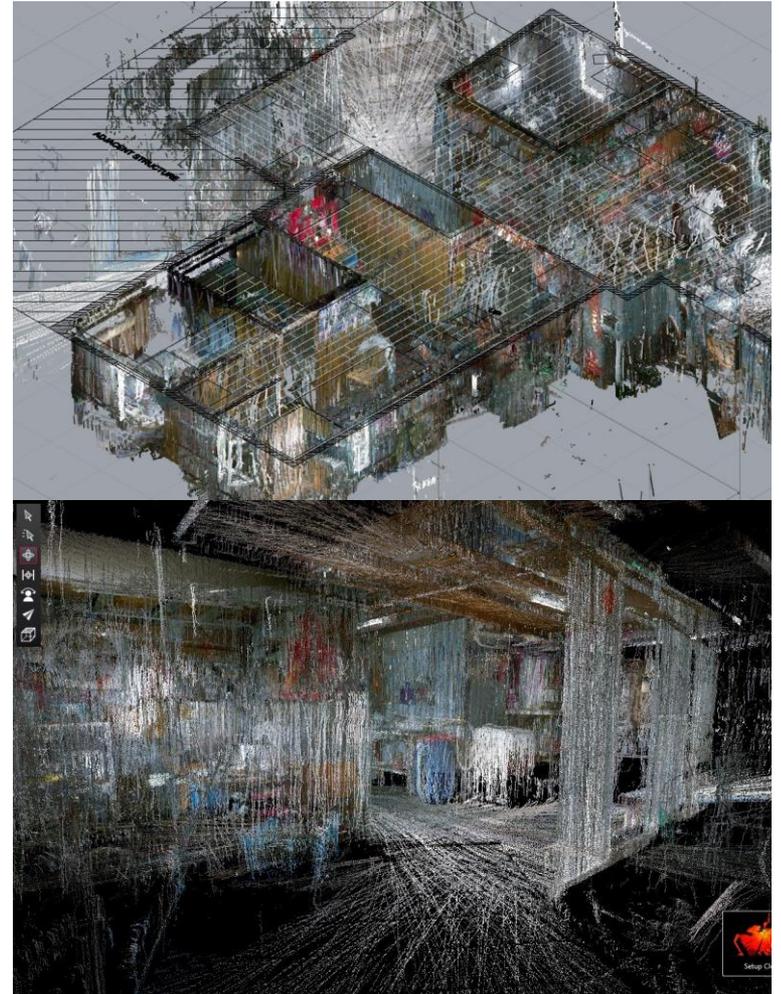
Research Methods, Prototypes & Materials

Section 2: GRF Project, 2021–2024

- Interviews were conducted in Cantonese and semi-structured around housing themes: informants' housing biographies, conditions and affinity.
- After each interview, we used the Leica BLK2GO LiDAR and photogrammetry scanner to scan each stilt house during a 5–15-minute walkthrough scan.
- We chose the BLK2GO because of its portability, ease of use and ability to capture detailed, transferrable and durable records of stilt houses' physical conditions.
- Data collection concluded in 2022.

Top: A parallel view of a scan of a stilt house with a partial orthographic plan drawing overlaid.

Bottom: A perspective view of a stilt house interior in a point cloud file.



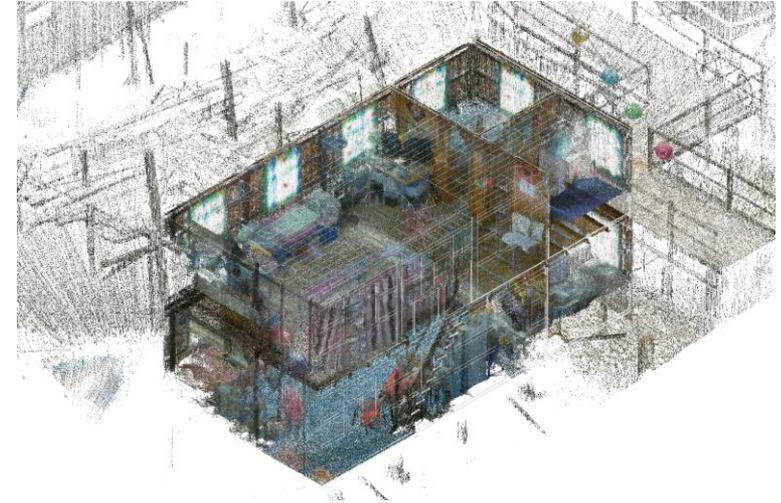
Research Methods, Prototypes & Materials

Section 2: GRF Project, 2021–2024

- Both datasets required significant refinement.
- The BLK2GO captures point cloud data, i.e. a collection of XYZ coordinates and RGB colour values that describe spaces and objects.
- Extracting useful information (e.g. stilt houses' gross-floor area, glazing area or kitchen size) required developing floor plans from each point cloud.
- Audio from ethnographic interviews also required transcription into text and translation into English – about 750 pages of interview transcripts.
- Transcripts made the conversion of rich interview data into meaningful summaries possible.
- Researchers 'coded' the interview data to summarise important 'themes' or ideas.

Top: A parallel view of a scan of a stilt house with a partial orthographic plan drawing overlaid.

Bottom: An example of an interview transcript file.



Case 694827 Interview, Conducted 26.07.22.

Overview: This interview was conducted as part of General Research Fund (GRF) Project 15600621, supported by the Hong Kong University Grants Council as part of the project, "A Case Study of Tai O's Stilt Houses: Historical and Geometric Indicators for Complexity and Variety in a Typology." The interview was an ethnographic interview investigating *a priori* themes related to housing: informants' housing histories, housing affinity and affect, and housing outlook. This interview transcript includes the discussion with residents of the house recorded under case number 694827. **This is the anonymized version of the interview transcript, designed for public distribution under a Creative Commons by Attribution license.** For additional information and materials, please contact Associate Professor Daniel Elkin at dkelkin@polyu.edu.hk.

These interviews were originally conducted in Cantonese and Hakka/Hokla dialects. Interviews were transcribed into Traditional Chinese and translated to English by Bill Tse, with proofreading and translation support by Emily Cheung Tsz Ching.

Persons involved in the interview include:

- [男 RES. 1] or [M. RES. 1]: A male, senior researcher for the project who conducted interviews.
- [694827 #1] or [694827 #1]: A female resident of the house.

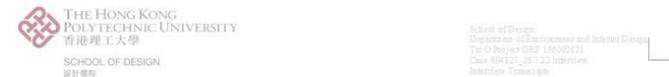
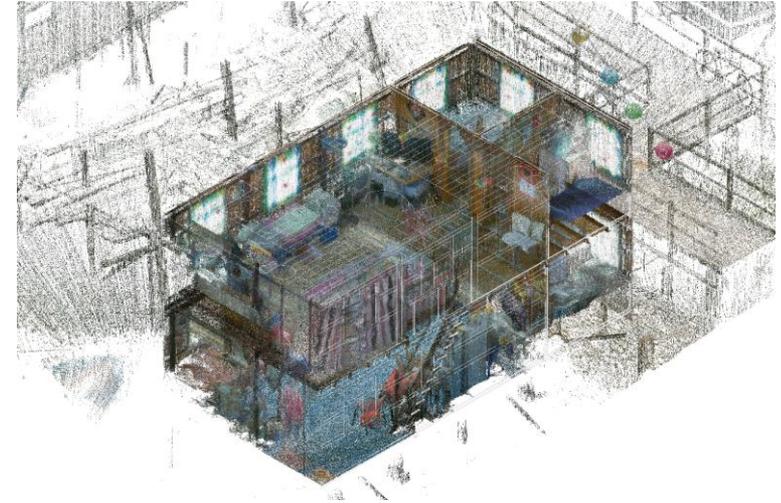
Research Methods, Prototypes & Materials

Section 2: GRF Project, 2021–2024

- Handling the informants' data also required care and preparation.
- Apart from obvious privacy concerns, policies that govern development in Tai O required extra care.
- Our original plan was to sample 50 stilt house-dwelling households. We only successfully sampled 20 by leveraging personal relationships.
- Why? Stilt houses are administered by the Squatter Control Policy (SCP).
- Stilt house residents who are found to have modified their housing from conditions recorded in 1982 may face serious enforcement action.
- We therefore anonymised the informants' data using random case numbers and only published anonymised versions of interview transcripts under 1-year embargoes.

Top: A parallel view of a scan of a stilt house with a partial orthographic plan drawing overlaid.

Bottom: An example of an interview transcript file.



Case 694827 Interview, Conducted 26.07.22.

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Persons involved in the interview include:

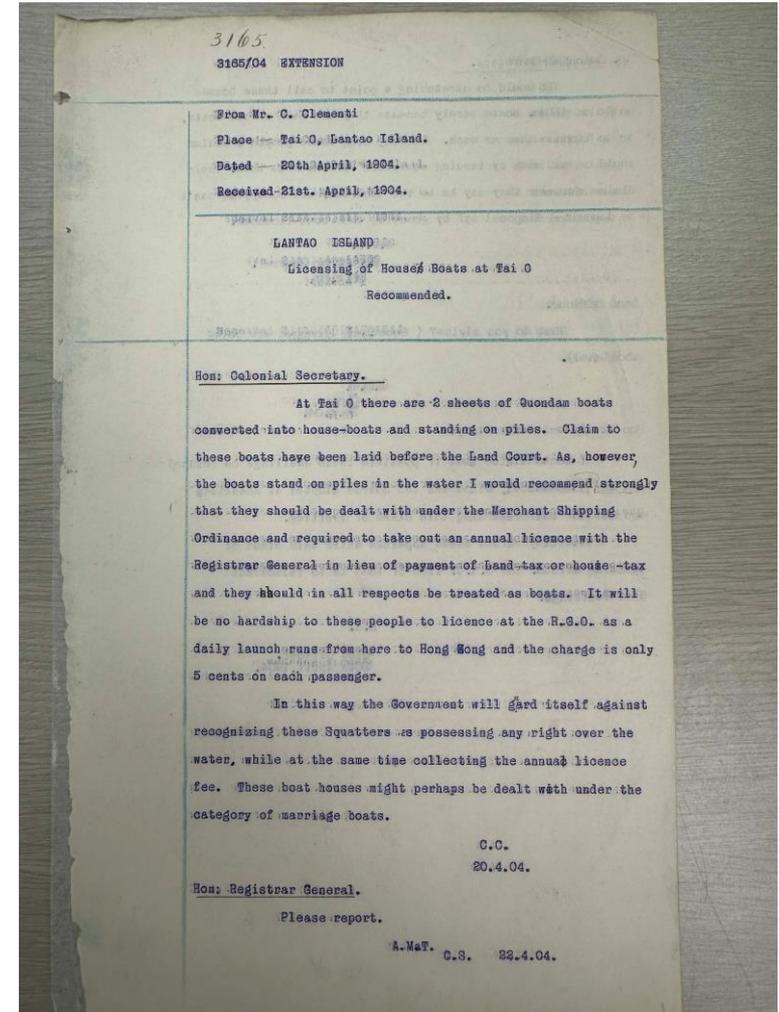
- [RES. 1] or [M. RES. 1]: A male, senior researcher for the project who conducted interviews.
- [694827 -#] or [694827 -F]: A female resident of the house.

Research Methods, Prototypes & Materials

Section 2: GRF Project, 2021–2024

- Next came a ‘zooming out’.
- Learning about land administration history from Smart, Lai, Kuah & Liu, Lai and our informants’ testimony inspired one last data collection effort.
- We reviewed records in the Hong Kong Government Records Service Archive to understand Tai O’s history.
- This, in turn, led to additional review of anthropological research by Anderson, Kani and others to understand boat people’s history and social development.
- We also interviewed a former HK Lands Department officer about the situation in Tai O Village.
- This additional literature review contributed to our most recent publications.

Image: An archival document from the Hong Kong Government Records Service Archive including a Lands Department memorandum (1904) on stilt houses at Tai O Village. (Image courtesy of the Public Records Office, Government Records Service, used with permission.)



Research Outcomes, Findings & Further Research



Find Research Data My Data



3D LiDAR and Photogrammetry Scans of a Stilt House in Tai O Village - 2022 - Case 729485

Published: 13 February 2023 | Version 1 | DOI: 10.17632/jm9vwdsdm6.1

Contributors: Daniel Elkin, Chi-Yuen Leung, Yan Wai Yeung, Norah Xiaolu Wang

Description

This data includes a point cloud file from a combined photogrammetric and LiDAR scan of a stilt house in Tai O Village. The house is designated "Case 729485" in the research project record. Researchers collected the scan using a single, approximately 10 minute walk-through of the house with the Leica-brand BLK2Go model 3D environment scanner. The scan describes the interior and partial exterior of a stilt house in high detail and color. The scan has been decimated to a voxel size of 5 mm to reduce file size. The data provides clear enough rendering of the physical conditions of the house to allow interpretation of the scan into description of the house's construction, contents, and spatial use. The data is available under embargo of one year to protect the personal information of residents of the house. provided for purposes of digital conservation

Dataset metrics

Usage

Views:

Downloads:



View

Latest version

Version 1
Published



GRF Project Outcomes

The GRF Project results have been included in 2 Journal articles, 3 conference papers and 3 public lectures.

Other output:

- A. Point cloud files of 20 stilt houses were published in the Mendeley Data Repository for digital conservation, research and public study.
- B. Each point cloud is a downloadable, fully 3-dimensional record of one stilt house (turntable video demonstration here). Links by Case:

[023157](#), [069817](#), [128590](#),
[169032](#), [241590](#), [261094](#),
[326789](#), [328954](#), [478523](#),
[539775](#), [583904](#), [651290](#),
[687795](#), [694827](#), [705384](#),
[729485](#), [729580](#), [837295](#),
[853147](#), [941756](#)



[Click here to view a video showing a stilt house scan point cloud in 3D.](#)

Research Outcomes, Findings & Further Research



School of Design
Department of Environment and Urban Design
Unit 1 Research Institute
Level 10/101, 387-2, University
Museum, Kowloon

Case 694827 Interview, Conducted 26.07.22.

Overview: This interview was conducted as part of General Research Fund (GRF) Project 15600621, supported by the Hong Kong University Grants Council as part of the project, "A Case Study of Tai O's Stilt Houses: Historical and Geometric Indicators for Complexity and Variety in a Typology." The interview was an ethnographic interview investigating *a priori* themes related to housing: informants' housing histories, housing affinity and affect, and housing outlook. This interview transcript includes the discussion with residents of the house recorded under case number 694827. This is the anonymized version of the interview transcript, designed for public distribution under a Creative Commons by Attribution license. For additional information and materials, please contact Associate Professor Daniel Elkin at dkelkin@polyu.edu.hk.

These interviews were originally conducted in Cantonese and Hakka/Hokla dialects. Interviews were transcribed into Traditional Chinese and translated to English by Bill Tse, with proofreading and translation support by Emily Cheung Tsz Ching.

Persons involved in the interview include:

- [男 RES. 1] or [M. RES. 1]: A male, senior researcher for the project who conducted interviews.
- [694827_女] or [694827_F]: A female resident of the house.
- [男 LIAIS. 2] or [M. LIAIS. 2]: A male field liaison for the project who conducted interviews.
- [男 RES. 1] or [F. RES. 1]: A female, senior researcher for the project who conducted interviews.

Chinese Transcription	English Translation	Time Codes
[男 RES. 1]: 這度嚟講, 你講吓你上一代先, 因為你唔會突然間嚟囉	[M. RES. 1]: Just talk about them one by one. You talk about your last generation first as you didn't come here recently.	00:00:00-00:00:04
[694827_女]: 講我自己住嚟度	[694827_F]: I'll talk about where I was living.	00:00:04-00:00:05
[男 RES. 1]: 先講吓你上一代先, 你上一代嗰度嚟囉先	[M. RES. 1]: Can you talk about your last generation first. Where does your last generation come from?	00:00:05-00:00:07
[694827_女]: 上一代, (高鏡房屋區 2)	[694827_F]: The last generation was in [STILT HOUSE DISTRICT 2].	00:00:07-00:00:09
[男 RES. 1]: (高鏡房屋區 2)	[M. RES. 1]: [STILT HOUSE DISTRICT 2].	00:00:09-00:00:10
[694827_女]: 喺 (高鏡房屋區 2) 對面 (高鏡房屋區 2), 舊時(高鏡房屋區 2) 對面嗰度囉	[694827_F]: They were at the opposite side of [STILT HOUSE DISTRICT 2]. They were in [STILT HOUSE DISTRICT 2]. In the old days, they were	00:00:10-00:00:14

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Museum, Kowloon

	at the opposite side of [STILT HOUSE DISTRICT 2] there.	
[男 RES. 1]: 你知唔知道	[M. RES. 1]: Do you know where it is?	00:00:14-00:00:15
[男 LIAIS. 2]: (高鏡房屋區 2)	[M. LIAIS. 2]: [STILT HOUSE DISTRICT 2].	00:00:15-00:00:16
[694827_女]: 係家吓嗰度度陣	[694827_F]: Yes, where's it?	00:00:16-00:00:19
[男 LIAIS. 2]: 邊度呀? 邊屋?	[M. LIAIS. 2]: Where's it? Bang Fang?	00:00:19-00:00:21
[694827_女]: 大澳, 家下嗰度囉喇教會呢	[694827_F]: Tai O. There's a church there.	00:00:21-00:00:25
[男 LIAIS. 2]: 啱, 教會嚟度	[M. LIAIS. 2]: I see. It's the church there.	00:00:25-00:00:26
[694827_女]: 叫做乜嘢喇, 大澳, 唔記得咗	[694827_F]: What is it called? Tai O. I don't remember that.	00:00:26-00:00:29
[男 LIAIS. 2]: (教會名稱) 呀喇	[M. LIAIS. 2]: It's the [CHURCH NAME].	00:00:29-00:00:30
[694827_女]: 唔係(教會名稱), 喇喇(教派)	[694827_F]: It isn't the [CHURCH NAME]. It's that [DENOMINATION] Church.	00:00:30-00:00:33
[男 LIAIS. 2]: (教派)	[M. LIAIS. 2]: It should be the [DENOMINATION] Church.	00:00:33-00:00:34
[694827_女]: (教派) 呀	[694827_F]: It's the [DENOMINATION] Church.	00:00:34-00:00:35
[男 LIAIS. 2]: (教派) 對喇	[M. LIAIS. 2]: It's the opposite of the [DENOMINATION] Church.	00:00:35-00:00:36
[694827_女]: (教派) 對面嚟度呀, 嗰度係邊度呀	[694827_F]: It's now the opposite of the [DENOMINATION] Church there. Where's it?	00:00:36-00:00:37
[男 LIAIS. 2]: 即係(高鏡房屋區 3) 嗰面,	[M. LIAIS. 2]: It's the [STILT HOUSE DISTRICT 3] there.	00:00:37-00:00:38
[694827_女]: 係(高鏡房屋區 3) 嗰度呀, 係嗰度囉, 做大仔嗰度住嘅	[694827_F]: Yes, it's [DENOMINATION] there. As an eldest son, he was living there.	00:00:38-00:00:41
[男 LIAIS. 2]: 啱	[M. LIAIS. 2]: I see.	00:00:41-00:00:42
[男 RES. 1]: 即係你阿爸你講緊	[M. RES. 1]: You're talking about your father.	00:00:42-00:00:43
[694827_女]: 我老貴嚟下	[694827_F]: At that time my father was living there.	00:00:43-00:00:44

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GRF Project Outcomes

A. Since audio of the stilt house occupants' oral histories cannot safely be published, full anonymised versions of interview transcripts are also available publicly in the Mendeley Data Repository following the embargo period.

Links by Case Number:

[023157](#), [069817](#), [128590](#), [169032](#), [241590](#), [261094](#), [326789](#), [328954](#), [478523](#), [539775](#), [583904](#), [651290](#), [687795](#), [694827](#), [705384](#), [729485](#), [729580](#), [837295](#), [853147](#), [941756](#)

A

Research Outcomes, Findings & Further Research

The screenshot displays a qualitative data analysis software interface. On the left, a sidebar titled 'Explore' shows a search bar and a hierarchical codebook. The codebook includes categories like 'Codes (12)', 'Memos (18)', and 'Document Groups (7)'. A specific code is highlighted with a black box containing the letter 'A'. The main window shows a transcript with a grid overlay. The grid has two columns: the first contains text excerpts from the transcript, and the second contains time stamps. A black box with the letter 'B' is placed over a portion of the transcript text.

51	[C-Long]: And then your adoptive mother...	00:02:16-00:02:20
53	[Chan For Mui]: She took care of me, and she also gave birth to ten children.	00:02:21-00:02:26
55	[C-Long]: She also had ten children, right?	00:02:27-00:02:29
57	[Chan For Mui]: Yes, she had ten children of her own but none of them survived to adulthood. In the past, women had many children, but most of them could not survive.	00:02:29-00:02:51
59	[C-Long]: That means the one who raised you had ten children, but none of them survived.	00:02:52-00:02:58
61	[Chan For Mui]: Yes, you're right.	00:02:58-00:02:59
63	[C-Long]: That's why she adopted you.	00:03:01-00:03:02
65	[Chan For Mui]: No, she still gave birth to ten children even after she adopted me, but none of them were able to be raised successfully. I don't know if it was their fate or mine, but my adoptive parents couldn't handle raising children. They couldn't handle me either and even thought about giving me away to another family. Later, someone wanted to take me in because they thought I was a good child, but my adoptive parents couldn't bear to part with me after thinking it over.	00:03:04-00:03:37
67	[C-Long]: That means she had ten children of her own but couldn't raise any of them successfully. After adopting you, she even considered giving you away to another family.	00:03:38-00:03:48
69	[Chan For Mui]: She said she didn't want me! If she didn't want me, many other people would. At that time, I was very thin and hardworking.	00:03:49-00:03:56
71	[Norah]: You were hardworking. What skills do you have?	00:03:57-00:03:59
73	[Chan For Mui]: I could gather firewood, fetch water, cook and clean.	00:04:00-00:04:08
75	[Norah]: How old were you?	00:04:08-00:04:09
77	[Chan For Mui]: I was 9.	00:04:10-00:04:11
79	[Norah]: You started doing so many household chores at such a young age?	00:04:12-00:04:13
81	[Chan For Mui]: Yes, I started doing chores at the age of 9. If I didn't do them, there would be no food to eat.	00:04:20-00:04:22
83	[Norah]: That means you were a child laborer.	00:04:24-00:04:26
85	[Chan For Mui]: That's how it was back then. They used bamboo sticks as thick as fingers to hit me, leaving my spine bruised and blackened. The injury couldn't be cured by doctors, and the pain still lingers to this day.	00:04:27-00:04:52
87	[C-Long]: They hit you.	00:04:52-00:04:53

GRF Project Outcomes

- A. The thematic summary was completed in spring 2024. The coding document cannot be widely published, but it can be shared with researchers as a searchable, topical index of our interview data. Here, important topics (themes or codes)...
- B. ...are tied to original interview text quotations, which allows researchers to cross-reference interview data.

Research Outcomes, Findings & Further Research

Stilt Housing in Tai O Village: Spatial and social patterns

General Research Fund (GRF) Grant: #15600621

Objectives

This project entails a digital survey and ethnographic study of stilt houses in Tai O Village, Hong Kong. Its objectives include:

To digitally document stilt housing conditions as instances of threatened cultural heritage.

To describe stilt house dwellers' housing biographies and occupation patterns through ethnographic interviews.

To describe prevalent spatial use patterns, social patterns, and relationships between the two through thematic analysis of interview content.

To describe relative volumetric complexity and variety of stilt houses across the sample.

Researchers selected stilt houses for data gathering through 'snowball sampling', facilitated by the Tai O YWCA Community Work Office. Households selected for sampling (n=20) allowed researchers to



Methodology

document their physical housing conditions using a Leica BLK360 3D environment scanner. One or more members of each household participated in two ethnographic interviews lasting up to one hour each. Interviews were semi-structured around topics related to personal and family history, housing conditions and decision-making, and the relationship between the two. Researchers interpreted 3D scans into floor plan drawings for description and analysis. Interview audio was translated into traditional Chinese, and translated into English, before researchers completed multiple rounds of thematic coding to describe interview content. Stilt housing cases are referred by randomly-generated case numbers. Case summaries presented are developed from original transcripts available on Mendeley Data Archive.

Project Credits

Principal Investigator: Associate Professor Daniel Elkin
Co-investigators: Dr. Chi-Yuen Leung, Dr. Markus Wernli,
Dr. Yan Wai Yeung
Collaborator: Dr. Norah Wang Xiaolu
Transcription, Translation: Bill Tse
Digital Drafting, Transcription, Proofreading: Emily Cheung Tze Ching
Digital Drafting: Fiona Lam

Special Thanks To: The Tai O Village Rural Committee,
The Tai O YWCA Community Work Office,
the University Grants Council.

Cross-Case Patterns: Physical Housing and Demographics

General Research Fund (GRF) Grant: #15600621

Project

Data gathering throughout 2021 and 2022 generated the following data:

Ethnographic description of 20 stilt housing conditions at the household level, with a total of 24 informants interviewed.

Physical description of 20 stilt housing conditions through 3D scanning and digital drafting.

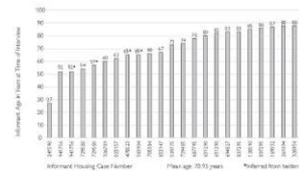
Stilt house-dwelling households' demographic attributes in the sample are presented here across the following variables:

Informant age in years
Informant gender
Informant marital status
And informant employment/ occupation reports on another panel.

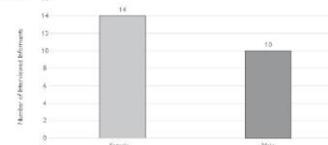
Physical housing conditions across all 20 cases are presented here using isometric section views of 3D scan files, annotated floor plans, and spatial allocation comparisons across the following variables:

Total house gross floor area (GFA)
Spatial use allocation area by program divisions, including:
Kitchens
Bedrooms
Living rooms
Dining rooms
Bathrooms
Exterior porches
and un-designated 'Other' spatial allocation areas.

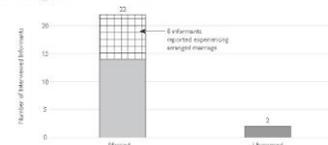
The composition of this sample is not meant to be representative of either physical stilt housing conditions as a population, or demographically of stilt house dwellers as a population.



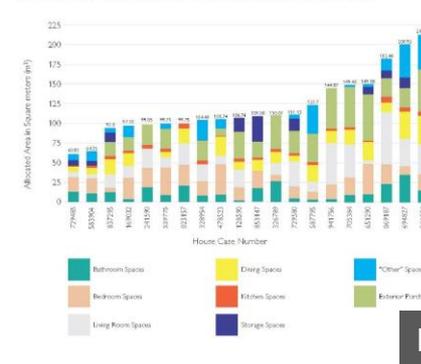
Informant gender



Informant marital status



Space allocation in sampled houses, ordered by total floor area



GRF Project Outcomes

We developed floor plans and analytical diagrams for all 20 houses in our sample.

These drawings were published in a PolyU SD Gallery exhibition and accompanying lecture in December 2024. The project posters were also digitally published [here](#).

Information from the posters support most of our findings about stilt house architecture.

- A. Project introduction posters...
- B. ...cross-case summary posters...



A

B

Research Outcomes, Findings & Further Research

Case Summary Housing Case 023157

General Research Fund (GRF) Grant: #15800621

Housing Construction Type:
Light wooden frame with metal cladding
Stories: 2
GFA: 99.75 square meters

Housing Age: 50+ years old. The informant stated he lived in the house for at least 20 years, and stated that the house was built during his childhood in the original location of the family's home.

Physical Housing Development and Informant Participation History: According to the informant, originally the house was a lean-to porch for the location. The informant stated, "I guess we got our neighbours to help with the expansion to build the still house. That was decades ago." The lean-to porch was built when the informant was 7 or 8 years old. In the 1970s, the informant stated that physical changes to the house, making that where it was built, "it was built like this." The house "is in the same position and site." The informant stated physical changes to house repairs and maintenance of the house.

Housing Occupancy History and Pattern: The informant family applied to the government to build the house in location where the house was parked in the informant's early childhood. The informant stated that he lived in the house until he moved to the house and then in the house. The informant mentioned many of his siblings and before he was born, and the two of his siblings and later in his childhood. He indicated that some of his siblings moved early and emigrated to New Zealand. He stated that family members returned to the car house often. They always come back for dinner. This place is full of people.

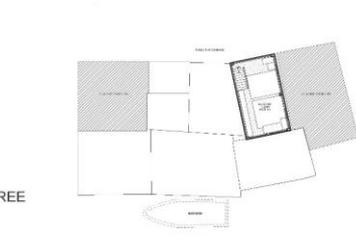
Housing History Biography: The informant reported living in the house for 20 years. Before, with his family in a lean-to porch at the location of the car house. He has apparently lived there since living in the car house that was built in the house's location, and stated, "I had been the whole time."

Housing Access Status: According to the informant's statement, the house had no known Staircase Squatter's Licenses.

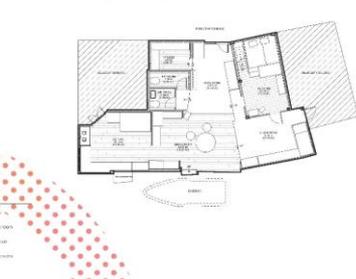
3D Scan File in Isometric Section View



First Floor Plan, 1:100 Scale



Ground Floor Plan, 1:100 Scale



023157 SPATIAL PROGRAM NODE TREE

NODE COUNT: 13
BRANCH COUNT: 12
BRANCH LEVELS: 3
CLOSED LOOPS: 8
ACCESS TO ADJACENT: YES
WIDTH: 7 LIMITS

LEGEND

	Node 1: 0.00m x 0.00m		Node 2: 0.00m x 0.00m
	Node 3: 0.00m x 0.00m		Node 4: 0.00m x 0.00m
	Node 5: 0.00m x 0.00m		Node 6: 0.00m x 0.00m
	Node 7: 0.00m x 0.00m		Node 8: 0.00m x 0.00m
	Node 9: 0.00m x 0.00m		Node 10: 0.00m x 0.00m
	Node 11: 0.00m x 0.00m		Node 12: 0.00m x 0.00m
	Node 13: 0.00m x 0.00m		Node 14: 0.00m x 0.00m

Case Summary Housing Case 069817

General Research Fund (GRF) Grant: #15800621

Housing Construction Type:
Light wooden frame with metal cladding
Stories: 2
GFA: 182.44 square meters

Housing Age: Approximately 40 years old based on estimation made by the informant. The informant stated, "The house is 40 years old, so the paint might crack and require repainting. Even if it has been painted before, it might need to be repainted again."

Physical Housing Development and Informant Participation History: The informant stated that he and his husband built the car house construction after they married. They originally lived with siblings in a house but had moved, and moved out to build their own house. The original house was on land later claimed by a landowner, so they moved again to build the car house with a combination of self and hired labor. The stated that his husband built parts of the house: "Yes, he did it. He was a carpenter. He had a window to help him." The house was mostly made, and the informant and her husband repaired the roof and was occupied land over to the house, and changing the location of the kitchen and bathroom.

Housing Occupancy History and Pattern: The informant stated that she and her husband built the house after they were married, moving from a house shared with her husband's siblings. As the time of the interview, the informant's husband was deceased, and the informant stated living in the car house with her son, daughter-in-law, and two grandchildren.

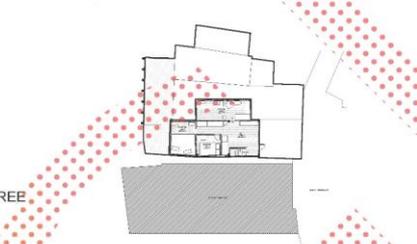
Housing History Biography: The informant reported living in and around the house for 40 years with her family as a child. After moving, the level in multiple locations in the house before moving into the car house. She reported living with her daughter in another part of the house for one year but moved with her daughter for the time they before moving to the house.

Housing Access Status: The informant stated that the house had a Staircase Squatter's License authorized by the deceased husband.

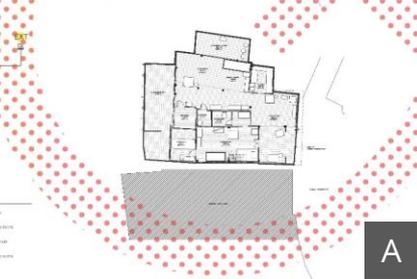
3D Scan File in Isometric Section View



First Floor Plan, 1:150 Scale



Ground Floor Plan, 1:150 Scale



D69817 SPATIAL PROGRAM NODE TREE

NODE COUNT: 18
BRANCH COUNT: 15
BRANCH LEVELS: 4
CLOSED LOOPS: 8
ACCESS TO ADJACENT: NO
WIDTH: 10 LIMITS

LEGEND

	Node 1: 0.00m x 0.00m		Node 2: 0.00m x 0.00m
	Node 3: 0.00m x 0.00m		Node 4: 0.00m x 0.00m
	Node 5: 0.00m x 0.00m		Node 6: 0.00m x 0.00m
	Node 7: 0.00m x 0.00m		Node 8: 0.00m x 0.00m
	Node 9: 0.00m x 0.00m		Node 10: 0.00m x 0.00m
	Node 11: 0.00m x 0.00m		Node 12: 0.00m x 0.00m
	Node 13: 0.00m x 0.00m		Node 14: 0.00m x 0.00m
	Node 15: 0.00m x 0.00m		Node 16: 0.00m x 0.00m
	Node 17: 0.00m x 0.00m		Node 18: 0.00m x 0.00m

GRF Project Outcomes

A. ...for each of the 20 houses.

Research Outcomes, Findings & Further Research

Field Notes Summary

Overview: This is a summary of field notes from an informal lunch interview with Mr. Alan Lo, HK Lands Department (LD) (Ret.) and Mr. Ben Siu Bun Chan, HK LD (Ret.) and The Hong Kong Polytechnic University Research Institute on Land and Space (RILS). The interview was conducted January 24, 2025, 12:30-13:45. PolyU Staff Club, Hung Hom, Hong Kong. Mr. Ben Chan arranged the interview and invited Associate Professor Daniel Elkin to discuss his research team's work in Tai O Village. These are Associate Professor Elkin's notes on the interview content.

Mr. Lo asked what I wanted to know about for our research. I asked him what the LD attitude was toward enforcement of the Squatter Control Policy (SCP) in Tai O Village.

Mr. Lo stated that the LD had, "No special policy," toward enforcement of the SCP in Tai O Village. He stated that enforcement of the SCP depended on comparison of on-site stilt house conditions against LD records. He indicated that, when enforcement officials encountered renovation conditions in stilt houses, their decision to act might depend on the similarity of the renovated condition to the original record. As examples, he talked about how a house made from wood that was still made from wood, or out of corrugated steel, "but probably not corrugated steel, because it isn't environmentally friendly," would not see enforcement action after renovation so long as the renovated condition was built of the same materials. [Note: This is consistent with the terms of the SCP.]

Mr. Chan asked Mr. Lo if the LD ran regular enforcement patrols and kept records of stilt house conditions. Mr. Lo stated that, yes, the LD supervised regular patrols to monitor stilt house conditions. He emphasized multiple times that the LD did not keep record of occupancy status in stilt houses, that the LD did not know who lived in stilt houses but only tracked their physical conditions. Mr. Lo stated that the LD kept digitized records, essentially, "floor plans," of stilt houses to assist in checking if stilt house conditions were compliant with the SCP.

Mr. Chan asked if stilt house residents were aware of or allowed to access the LD records of their stilt house conditions. Mr. Lo stated that, "anyone concerned," with the conditions of a particular stilt house would have access to the records at their request. Mr. Lo mentioned also that these records were not publicly available otherwise, and related that a former Chief Executive requested the entirety of LD's records on stilt houses in the past and were refused access. [As an internal note, I originally requested access to the same records and was

Field Notes Summary

Overview: This is a summary of informal communication with a "Mr. Lo," a stilt house resident living intermittently in Tai O Village, Hong Kong. Mr. Ben Siu Bun Chan, HK Lands Department (Ret.) and The Hong Kong Polytechnic University Research Institute on Land and Space (RILS) forwarded this correspondence to me, Associate Professor Daniel Elkin, on January 24, 2025. The text shown includes the original traditional Chinese and English translation of Whatsapp messages sent directly from Mr. Ben Chan to me. Mr. Chan stated that he used "Poe" to translate Mr. Lo's original text and forwarded the content to me in a Microsoft Word Document. The text follows, along with a screen capture of my Whatsapp conversation with Ben Chan referencing the event.

奧
大澳的歷史、文化和水上人居住的棚屋的獨特風格，比較難找到詳細的文獻，因為大部份奧的居民是「蜑家人」，早期因為住在船上，經常出海作業，居無定所，大多缺乏正規的記錄，甚至不少是「文言」，故留下的文字記錄也非常少。

不少原居民確實在大澳居住了很多代（我聽爸爸說可以追溯到五、六代之前都是居住在大澳以捕魚為生；在戰前我們的家族都擁有很多艘漁船，不過在二戰期間，不少被日軍炸毀）。很多資料都是透過原居民「口述」提供，就算是事實，都可能在年份、地點、人物和發展過程未必很準確。

可以透過相片、歷史建築物和保存下來的物件來推想當時的生活情況。例如「楊侯古廟」是建於清朝康熙 38 年（1699），便可以推算在清朝甚至更早的年份，奧已經有人的活動。

在我的印象中，在五、六十年代，大澳仍是「十分偏遠的漁村」，要從陸路或海路從城市來都要幾個鐘頭，因此很少「城市人」來大澳。但都有一些外來者例如駐守大澳的警察、市來教書的老師和一些教會辦學團體（宣道會、中華基督教會）。

戰後 60 年代，捕魚業興旺，據聞有五、六百艘大小漁船，直到 80 年代後捕魚業息微，約 100 艘左右。

那時因為戰後和平，捕魚業興旺，需要大量人手，大部份家庭都樂意有更多子女（我認識不少有超過 10 個子女！）

70 年代以後，香港的工業發展蓬勃，漁民的下一代都覺得出海捕魚很辛苦，也沒有前途，等候很多青年人離開大澳往城市去，做一些勞動業的工作，例如在工廠製衣、電子廠、機器廠……較年輕的可以去到城市繼續接受教育，我自己就是這批比較幸運的一群。

至 80 年代以後，大澳人口急劇減少，只剩下老婦，便直接影響到捕魚業的發展。

很多留在大澳的居民開始經濟轉營，轉做小生意買賣或餐飲，主要針對當時的增多。據我自己的體會，是互聯網的發展，把大澳這個寂寂無名的小漁村，慢慢推廣成

GRF Project Outcomes

- A. Presentations of our findings at exhibitions and lectures led to personal communication with a Mr. Alan Lo, formerly of the HK Lands Department...
- B. ...and a 'Mr. Lo', who lived intermittently in a stilt house in Tai O Village and was a stilt house contractor's son. Field notes on these personal communications are published [here](#).

Research Outcomes, Findings & Further Research

GRF Project Findings

- RQ1: What impact has the changing geopolitical context around Tai O Village had on the village and on stilt housing in terms of its development, administration and management?
- Following Smart, HK Governments have treated informal settlements differently over time, allowing 'managed persistence' for varying political reasons.
- Following Kuah and Liu, the HK Government has promoted Tai O as strategically valuable cultural heritage.
- Despite this, HK government officers state goals to both eliminate 'squatter structures' *and* maintain stilt houses 'to facilitate culture conservation and community support' (Wong, 2019).
- In sum, governments' management of stilt housing has been uneven and impacted informants in our study.
- Informants in only 6 households in our sample clearly claimed rights to occupy their stilt housing.
- Of these 6, household case 729580 vacated their stilt house in 2021 after facing SCP enforcement action.
- Other informants expressed doubt and confusion about their tenure status.
- Many were fatalistic about stilt houses' future, despite having strong attachment to their housing.
- Two stilt house informants noted recent tourism development impacts – increased cost of living and tourism traffic in Tai O Village.
- The same two recommended more development in Tai O – especially better public amenities.

Research Outcomes, Findings & Further Research

GRF Project Findings

- (Continued from the previous page.)
- HK Government's specific handling of Tai O connects to the social history of boat people in Hong Kong.
- Anderson, Kani – Boat people were historically in the lowest Chinese social class.
- Allen Chun – Colonial land reform was modelled on Chinese lineage villages. People with landed lineage records received special land privileges.
- Anderson – Boat people could not and did not keep extensive family lineage records.
- HK's colonisation legally codified boat people's low status by excluding them from land tenure and other legal reforms.
- Anderson – Boat people's habitation practices and occupations were different, but boat people were ethnically and culturally Cantonese – a subculture.
- Anderson – Many Cantonese family histories included habitation on water within 1–2 generations.
- But colonisers modelled land tenure reform on lineage villages, so they treated boat people very differently.
- Some were granted special fishing rights and water tenure (Lai), but most were not.
- In Tai O, stilt houses were designated as squatter structures and *not* boats, partly based on the personal discretion of colonial-era land officers, as shown in archival records.
- In sum, informal settlement management in Tai O has been uneven, inconsistent and politically contingent.
- This has directly and negatively impacted stilt house occupants' lives and livelihoods.
- Recent strategy (the SLB) is designed to promote stilt housing as a cultural heritage, but stilt house occupants' situation has not meaningfully changed.

Research Outcomes, Findings & Further Research

GRF Project Findings

- RQ2: What physical/architectural conditions and spatial usage right conditions distinguish stilt housing from other housing patterns?
- Spatial sharing and customary land tenure arrangements were clear patterns in our sample.
- 7 houses¹ in our sample directly connected to neighbours' dwellings and/or featured shared spatial usage areas.
- Informants in 5 houses² testified to complex land tenure arrangements, informally paying 'ground rent' or sharing a stilt house license across several interconnected stilt houses.
- In sum, stilt houses' physical conditions were not only distinct, but they were also the product of historical development and personal/family histories.
- Stilt house occupants in our sample mostly voiced strong attachment to their stilt houses and compared stilt housing favourably with other options because of social connections, familiarity and personal or familial attachment to their housing.

1: Cases 023157, 169032, 326789, 328954, 687795, 694827, 853147. 2: 128590, 169032, 328954, 694827, 941756

Research Outcomes, Findings & Further Research

GRF Project Findings

- RQ3: Do boat people have a distinct socio-spatial theory?
 - Do historical and contemporary sources suggest that boat people have a distinct 'social theory' (i.e. a set of ideas about how people should relate to each other and what people should value)?
 - Does that social theory connect to or impact physical space and spatial usage practices to describe a socio-spatial theory of stilt housing?
- Anderson – Boat people were Cantonese people differentiated by living on water and accompanying conditions.
- Anderson – Their theory of society (i.e. ideas about how people should behave and relate to each other) was distinct from other Cantonese peoples, a, 'variation on Chinese themes'.
- Anderson – Boat people valued autonomy, egalitarianism and communitarianism because these values were essential to surviving on water.
- Anderson – This impacted their expectations for spatial privacy and use. Boat people were very tolerant of spatial sharing and use negotiation.
- Stilt houses in our study showed a strong pattern of spatial sharing and use negotiation.
- Informant testimony also *explicitly connected* this spatial pattern to stilt house occupants' social relationships and expectations, including personal familiarity and/or blood relations.
- Mr. Lo's later testimony also connected stilt house residents' social theory to spatial sharing.
- We can therefore see stilt houses as a physical expression of a socio-spatial theory.
- This theory represents a way of building and using space that connects strongly to boat people's social values and expectations for behaviour.

Research Outcomes, Findings & Further Research

GRF Project Findings

- RQ4: What differentiates stilt house residents' socio-spatial theory from its surrounding context?
- There are only around 350 stilt houses left in Tai O Village, and Tai O's stilt house districts are the largest that remain.
- Stilt housing is increasingly uncommon in Hong Kong.
- Anderson – As of 1975, 'almost no one lived on water'.
- Lin (2022) – Only about 1,125 boat people left.
- Stilt house occupants' customary tenure agreements are also *legally* different from the surrounding, highly formalised real estate environment.
- How the relationship between boat people's social theory and stilt housing's spatial conditions compares to other socio-spatial theories in HK is harder to know.
- Mr. Lo made comparisons: 'The interconnected construction of stilt houses fosters harmonious relationships among residents, more evident compared to the detached houses in rural areas of the New Territories'.
- Mr. Lo did not provide much evidence to support his assertion.
- There are likely other housing conditions under which residents negotiate and tolerate spatial sharing well for similar or other reasons.
- This is an area for further research explored in MCO2.

Research Outcomes, Findings & Further Research

GRF Project Findings

- RQ5: What steps have Tai O Villagers and stilt house residents taken to negotiate developmental change and maintain or reproduce their cultural assets?
- Most stilt house residents in our sample were elderly (mean age = 70.95 years).
- We asked them about their outlook for their stilt houses, trying to understand their intentions for the future.
- Many were fatalistic and expected the HK Government to repossess or demolish the stilt houses.
- Many also stated their intention to pass their stilt houses on to children or other descendants, which is technically illegal for most.
- One stilt house (941756) was occupied under a family sharing arrangement at the time of our survey, and another occupant (in house 705384) entertained donating his stilt house to a charity after his death.
- At the time of our survey, intentions to conserve and maintain stilt houses varied family-to-family and depended on younger family members' preferences.
- In sum, evidence of some incidental – but no organised – efforts to conserve stilt housing as a practice was found in our study.
- However, many stilt houses supported multiple generations of families in Tai O, who lived in stilt houses in intermittent and/or permanent occupation patterns.

Research Outcomes, Findings & Further Research

Further Research

- Policies constraining development in Tai O Village make thorough sampling of stilt housing difficult.
- Recent personnel changes at the Tai O YWCA have also limited our ability to continue working with them.
- Further research in Tai O will therefore focus on:
 - Processing and publishing the GRF data.
 - Exploring archival and grey literature sources for more information on boat people and land policy.
 - Pursuing the local museum renovation project in Tai O if feasible.
- Other research will study housing elsewhere to develop comparison cases and better support the findings reported here.
- Larger sample sizes and opportunities for inferential analysis are also a research objective (see MCO 2).
- Elkin's research focus is also narrowing to study social solidarity and its relationship to physical space variables more intently.

Research Dissemination

Pilot Project Dissemination

- The [International Social Innovation Research Conference 2021](#) conference paper explores collaborative governance regimes and the pilot project's experimental approach.
- The [UIA 2020 27th World Congress of Architects](#) conference paper focuses on tourism development and housing construction technology in Tai O.
- The [book chapter](#) included in [Design Commons: Practices, Processes and Crossovers](#), published by Springer, proposes a conceptual genealogy linking architectural theories to Elinor Ostrom's scholarship on the commons and then critiques our living lab work within this theoretical framework.
- Public lectures that have featured work from the pilot projects include:
 - An August 2022 public lecture at PolyU exploring urban futures in informal settlements in HK and Cape Town, South Africa.
 - A July 2021 public lecture at PolyU discussing urban and peri-urban relationships.
 - A May 2021 lecture at PolyU discussing technical aspects of the project.
 - A May 2021 lecture at PolyU connecting the projects to 'the commons' and data sharing.
 - A February 2021 lecture at Hong Kong University connecting the projects to collaborative governance regimes.
 - A September 2020 lecture at PolyU connecting the projects to resilience theory.
- The pilot projects were disseminated via one public exhibition/installation, the 'Tai O Village Pedestrian Monitoring Project', from 2019–2020.

Research Dissemination

GRF Project Dissemination

- The Hong Kong Institute of Architects (HKIA) Journal article is a viewpoint piece recommending a socio-normative approach to AI technology, explored using point cloud data from the GRF project.
- The 11th East Asian Conference in Alternative Geography (EARCAG) conference paper summarised our informants' experiences in the context of 'informality' in HK following Smart and Lai's studies.
- The International Association of Societies of Design Research (IASDR) 2023 conference paper reviewed the GRF project as a digital conservation effort and focused on 3D scanning as a technique for conserving threatened vernacular architecture.
- The 9th International Conference on New Trends in Architecture and Interior Design conference paper reviewed the 3D scanning and digital conservation workflow implemented in the GRF project.
- Public lectures that have featured work from the GRF Project include:
 - A December 2024 public lecture at PolyU summarising findings from the project.
 - A November 2024 lecture at PolyU to visiting faculty from Silpakorn University detailing the project's digital surveying approach.
 - A June 2023 public lecture at PolyU connecting findings from the GRF project to other research on housing satisfaction (MCO 2).
- The GRF project results were also disseminated through a public gallery exhibition at the School of Design's 10th Floor Gallery in December 2024.