

February 18, 2026

Dear Evaluation Committee,

This report summarizes my review of the dissertation written by Ms Marta Smektala titled “Urban balcony: user needs, social and legal norms Foundations for discussing the introduction of balconies into the courtyards of Wrocław tenements”.

Overall comments

This is an accomplished and rigorous doctoral dissertation by Ms Marta Smektala that investigates the potential for integrating balconies into historical tenement housing in Wrocław, Poland. The author argues that while balconies have proven benefits for urban quality of life, providing climate resilience, mental well-being, and additional usable space for residents, they are systematically overlooked in Polish heritage renovation practices. The dissertation focuses on two primary areas: the user experience including factors that influence balcony usability and the alignment between current design practices and residents' needs, and conservation and feasibility, exploring whether balconies can be integrated into the courtyard elevations of Wrocław's historical tenements despite spatial, legal, and heritage constraints. The mixed-method approach of this study is suitable for the research question. The dissertation reports on results from a literature review and comparative analysis of heritage protection laws and building codes in Poland, Germany (Chemnitz), Denmark (Copenhagen), and Austria (Vienna). The author conducted an observational study, which provided a quantitative analysis of over 3,000 balcony exteriors in Wrocław to categorize activities and patterns of use. There were 28 semi-structured interviews with residents and 22 semi structured interviews with stakeholders including architects, developers, heritage officers, and real estate agents, to gain a different perspective on values and social norms around balconies. Additionally, Ms Smektala used daylight simulations to assess how adding balconies impact unit daylighting and shading. The dissertation is well structured and clearly written with strong key findings. It is notable that the results of this study were published in several highly regarded peer reviewed journals. It is my conclusion that this is a thorough and rigorous doctoral dissertation and my recommendation is that this pass with minor revisions.

I have summarized my additional comments and recommendations below:

1. Introduction

The introduction is well written and has an appropriate level of detail. I would recommend subheadings to help guide the reader.

2. Scope

This section is very clear and well written.

3. Methodology

In the literature review on balcony research, it could be worth noting that there are many scholarly papers and studies on noise, some on wind, and some on thermal bridging and some on construction.

The author may want to include findings about any published design guidelines for balcony sizes, like minimum sizes or design elements for the balconies.

In Section 3.2 I would recommend adding some additional detail. For example it would be good to know more about the “limited visibility sometimes” statement and how much this was an issue. For example, was it always possible to stand far enough back on the group to see the upper levels? Why only observe on weekdays, wouldn't people be at work? How many researchers were involved in the observations and how were they trained?

In considering the methods and findings, I would imagine building height would be a major consideration. Were all of the buildings studied low rise, like under 4 stories? This should be clarified.

I would suggest that the author may want to reflect on the process of the observational study. This could be relevant when considering replicability of the method, and reporting on what went well and what did not. For example, how relevant would these observational findings be in different urban contexts with taller buildings? From this reader's perspective, it makes a big difference because it may be comfortable/useful to use a 3rd story balcony and not comfortable due to wind, safety etc to use a 9 story balcony.

3.3 For the semi structured interviews, the interview questions (not the answers, as this would likely be too lengthy) should be included in the appendix.

3.3.2 I would also expect the interview questions for the professionals to be explained a bit more and if possible included in the appendix.

In 3.6 the author should explain the decision to use Daylight Factor rather than daylight autonomy or another metric like useful daylight illuminance. It would be good to add a sentence or two here to justify this decision and add one or two references.

In 3.6 with regard to the question of balconies decreasing light penetration into that unit, it might be worth clearly stating that all protruding balconies limit light penetration into the unit. Of course, it would matter most the orientation of the unit, and the geometry of the unit (is it narrow and deep, or does it have a wide area with windows) and then the size of the windows. I think the author has made clear that from a daylighting perspective, adding a balcony or not would not have a significant impact on its own if one compares the same unit with and without. There could be a sentence that states that it was found that most units were not adequately daylit, and this is an issue for a future study, not for this study..

4. Summary the published papers

It is notable that the results of this study were published in highly regarded peer reviewed journals. The five articles are excellent and well written.

5. Key Findings

This is a strong section of the dissertation. I would note that generally Section 5 will be improved by having more subheadings to guide the reader and additional images and diagrams to illustrate the key findings. One photograph is simply not enough in a study that relied so heavily on observation and resident perspective. For example there could be some architectural diagrams (like take some key images from the published papers) and some photos. While it is clear that Section 5 relies on the reader also reading the published papers, I still think the key findings section needs to be improved through a few images for clarity and completeness of the key findings.

Section 5.1

At the start of 5.1 it is stated “Observations indicate that the limited evolution of balcony design is largely due to a lack of critical reflection and innovation, resulting in the perpetuation of “design as usual.” I think the author should revisit this sentence as it is not clear whose reflection is missing? The overall document seems to claim that small balconies were provided initially for this housing due to cost and that now

people would prefer larger balconies. Whose lack of reflection and lack of innovation is missing? I think this should either be clarified or this sentence removed. I don't think the observations of this dissertation about patterns of use related to "design as usual".

A question for the author to consider: Why do you think establishing universal design guidelines is so challenging? We are able to create design guidelines or shared norms and sizes for other culturally significant aspects of housing, like bathrooms and kitchens, why do you think balconies are so challenging?

Page 43 the discussion is good but the author stops short of recommending a minimum size requirement for balconies. Do you think that there should be a "minimum size" or does it depend on the context, size of the unit etc?

This is an interesting finding: "While developers and architects often prioritize southwest-facing balconies to maximize sun exposure, empirical observations indicate that south-facing balconies can become uncomfortably hot during the summer, thereby limiting their usability. Consequently, design strategies should incorporate thermal comfort measures—such as shading devices—or consider the addition of secondary balconies oriented toward cooler exposures, particularly in the context of ongoing climate change." Due to lack of subheadings and subheadings some of the really interesting key findings seem a bit buried in the text. For example it is interesting that people found the south facing balconies too hot and the north facing ones were more comfortable in some situations.

Did you have any findings about how balconies should be smaller in smaller apartments and larger in larger ones? Like should the balcony size be related to the overall unit size?

Page 48 states "A combined solution that connects the elevator directly to a balcony platform could enable barrier-free entry into individual apartments, significantly improving accessibility for residents with limited mobility. In this way, balconies serve not only recreational and aesthetic purposes but also support the long-term adaptability and inclusiveness of historical housing stock." Is this a potential way that a renovation could include both modernization and a balcony in one renovation and perhaps it would pay for or justify the cost of the balcony? If so the author should reflect on this. When reading the dissertation I was thinking that this seems to be a missing reflection: What about the cost, does the author have any thoughts about how renovations will be paid for and balconies added?

On page 50, there is mention of "a 300 lux as a minimum acceptable illuminance level". This 300lux could be met using only artificial lighting but I do not think the author is interested in artificial lighting. This small section needs clarification. The author should clarify where this 300 lux target came from and what targets are for daylighting (I believe there is no requirement at all for daylighting only that illuminance levels need to be met where applicable) . For example, as far as I am aware there are no residential daylighting interior lux level requirements, is there a Polish or other requirement for 300 lux. The statement "Current Polish regulations related to overshadowing, sunlight access, and shading do not provide sufficient criteria for ensuring adequate daylight conditions in residential spaces" needs to be more fully explained with explanation of which regulations are in place.

6. Conclusions

This section is clear and it is appreciated that the research questions are explicitly asked and answered.

7. Future work

In section 7.1 could cost be explicitly referenced as a challenge and area of future work? It seems like it is being hinted at with the example of considering the balcony provision as a kind of modernization work like an elevator but for longer term benefit for residents. Currently this 7.2 mentions this but does not mention

that future work should include studying the local context and considering how affordability and cost factor into the addition of balconies (how to make them part of a modernization budget)

In section 7.3 it might be worth reflecting upon the need for future work that considers thermal comfort and orientation at the dwelling scale, not only about the balcony but including the balcony. The issues about thermal comfort and orientation relating to adding a balcony are the same as the issues with the whole unit. It is noted that for example north facing units suffer from poor daylighting, clearly adding a balcony doesn't improve that, but overall the unit still has poor daylighting. Perhaps future work could consider planning building forms and unit layouts that minimize poorly daylit dwellings and prioritize where to put balconies for the greatest resident benefit.

An issue with 7.4 is that illuminance levels in buildings can be made up by both daylight and electric lighting. So does the "outdated and overly prescriptive nature of current Polish standards" note which percentage of lighting must be daylighting?

8. Overall Contribution

This section is clear and appropriate.

9. Outreach materials

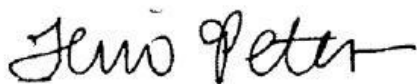
These are a good addition to the document. I appreciated the inclusion of the videos and the full papers.

Evaluation Final conclusion:

It is my opinion that this work fulfills the requirements of a doctoral dissertation and has made a strong scholarly contribution. Ms Marta Smektała has clearly demonstrated great aptitude for independent scientific work.

Please do not hesitate to contact me to discuss any aspect of this evaluation.

Sincerely,



Dr. Terri Peters

PhD, Architect (ARB), MRAIC, WELL AP
Associate Professor, Department of Architectural Science
Faculty of Engineering & Architectural Science, Toronto Metropolitan University
Terri.Peters@Torontomu.ca