Beyond Architecture as a universal catalyst of social cohesion

Fascination

My fascination lies on the intersections of topics and areas. The junction of architecture and building technology is a relatively new interest of mine, hence the selection of Architectural Engineering Studio. The meeting point of architecture and sociology or environmental psychology, however, where the strive to enhance architecture meets the goal of imporving the lives of its users, has always occupied my mind.

Architects hold a power of making an impact. It is a responsibility that shall not be underestimated.

Background

With all the ambiguities regarding its definition, the concept of social cohesion is a topic of ongoing academic dispute (Fredkin, 2004, p. 409). What is indisputable, however, is the necessity to strive for the improvement of social cohesion in modern society. It is essentially, a focus on improving the overall well-being of its members through a community-building approach.

In the context of the built environment, the topic of social cohesion is slowly gaining momentum. The vast majority of academic publications examine social cohesion in the context of green public space, thus, focusing on the intersection of landscape architecture and urbanism. Urbanism and urban planning also receive some attention, for example, with publications like "Public Space Design and Social Cohesion", a book by Patricia Aelbrecht and Quentin Stevens. Generally, however, the number of publications on the topic of social cohesion in the built environment is still relatively low, leaving a gap for potential further research.

The coverage of the intersection of social cohesion and building design specifically, is much smaller. The few available publications on the topic are mainly Master's and Bachelor's students' theses focusing on researching the potential of community centers to foster social cohesion (van Urk, n. d.; Flap, 2022) or on strengthening social cohesion within high-rise buildings (Kootstra, 2020; Noordenbos, 2022).

This lack of research on the intersection of social cohesion and the built environment, especially building design might stem from the broadness of the topic and the ambiguities of the concept of social cohesion. The lack of one comprehensive definition of social cohesion may be a factor undermining the credibility of the concept. Indeed, looking into the intersection of building design and specific aspects of social cohesion, for example, social interactions uncovers a collection of publications concerned with the topic, thus, confirming the urgency to unify the definition of social cohesion and social cohesion in the context of building design.

Key words

Architecture, social cohesion, community building, social interactions, diversity, social discussion, unity

Problem statement and design objective

The first mentions of the concept of social cohesion appeared around the 14th century in the writings of Ibn-Haldun, an Arab sociologist, philosopher, and historian, who proposed the idea of *asabiyyah* which translates to a group feeling or social cohesion (Moustakas 2023, p. 1028).

In the field of architecture, however, historically, the concept of social cohesion was not a topic of concern. The first urban plans did not consider a space for a community center within the area of a town. Instead, the gathering places, like the main square or the church naturally acted as the community centers fostering human interactions. Every town and city had one or multiple characteristic points of gathering. In the case of Lublin (Poland), within the site selected for the development of this project, that gathering place was a market square. The spatial proximity of three temples, a Roman Catholic church, an Orthodox Catholic church, and a Synagogue, located in the area, influenced the multi-cultural and multi-religious identity of the place. The temples, the market square, and the well, all located in the Jewish neighborhood acted as a catalyst for social interactions (fig. 1). Polish farmers supplied the market with kosher products, and the assortment was adjusted accordingly to Jewish holiday customs. The area was lively and diverse especially on Sundays when both Catholic and Orthodox churches held services inviting people from different areas into the Jewish neighborhood (Przystojectki, n. d).



Figure 1. The characteristic points of the historic Jewish neighborhood projected over the current satelite view of Lublin (own elaboration on the base of a Google Earth image).

The special value of those interactions was the multiculturality. Since commonalities to unite over are an important aspect of social cohesion or a feeling of community, it is more difficult to attain within a group of people coming from different backgrounds, leading to potential conflicts (Moustakas 2023, p. 1029).

Unfortunately, most of the old town of Lublin disappeared from the map during WWII leaving little to no trace of the previous character. The Roman Catholic and Orthodox Catholic churches survived, however, the Synagogue and the rest of the Jewish neighborhood were destroyed. The only still existing remnant is the well. The area surrounding it and the space left after the old market square, however, were turned into a bus station by the post-war communist government.

Currently, the bus station is being replaced by a bigger development further away from the historical old town of Lublin. The old bus station is about to be demolished to free up the land in the very center of the city. However, the municipality does not have a plan for the new development of this area yet (Domagala, 2023). Thus, the design objective of the project is to propose a temporary pavilion, that aims to strengthen the social cohesion of the modern community of Lublin, commemorating the multiculturality, but mainly the social cohesion of the pre-WWII city. The pavilion could occupy the building site until the municipality decides on the direction of the new development for the area. After the decision is made, the pavilion will be disassembled and can be transported to any place in the World that needs aid in strengthening social cohesion.

The universalization of the pavilion requires applicability in a variety of contexts. Therefore, the research also needs to be broadened outside of the Polish setting. Additionally, to keep the idea of learning from the past, the research will consider different time frames. The focus, however, remains on the gathering places, public like the market, or semi-public like the temples, following the initial example of Lublin. In order to identify the aspects that influence social cohesion within building design, further referred to as "themes", the research will investigate the structural design and architectural symbolism as well as indoor climate performance and sensory stimulation of various case studies. Thus the research question and the sub-questions present themselves as follows:

Overall design question

How can architecture become a universal catalyst of social cohesion?

Research question

How did public and semi-public gathering places promote social cohesion in the past and in what ways did architecture influence that phenomenon?

Sub-question

How do the previously identified aspects of social cohesion materialize in public and semi-public gathering places?
 How did structural design and related to it architectural symbolism act as a catalyst of social cohesion in the public and semi-public gathering places of the past?
 How did indoor climate performance and related to it sensory stimulation act as a catalyst of social cohesion in the public and semi-public gathering places of the past?

Theoretical Framework

As the number of researchers investigating the topic of social cohesion rises, so does the overall confusion regarding its definition (Fredkin, 2004, p. 409). The variety of academic publications in the area of sociology and psychology mixes with several publications of governmental institutions that take responsibility for applying the theory in practice. Each party develops its own definition of the concept contributing to the disarray.

It seems to be a trend, that the causes of social cohesion become confused with its effects, especially in the policy-oriented literature (Chan et. al., 2006, p. 279). Various scientists researching social cohesion advocate for narrowing down its definition for the sake of clarification (Moustakas 2023, p. 1029). Chan et. al. argue that a good definition should be "(1) minimal in scope and (2) close to ordinary usage" (Chan et. al., 2006, p. 280).

Therefore, for the sake of this research, social cohesion is given the most basic definition related to the standard, daily use of the word "cohesion" provided by the Cambridge Dictionary. Thus, social cohesion is "the situation when the members of a society are united" (Cambridge Dictionary, n. d.). This minimalistic definition allows for the identification of various "aspects", of social cohesion, both causes and effects, that fall within the definition of social cohesion in academic and policy-oriented literature. For the sake of clarity and openness to the variety of research approaches, these aspects are kept separate from the definition of social cohesion in this research. As a result, aspects can encompass both causes and effects without bringing confusion into the definition of the concept itself.

Furthermore, in order to identify the main aspects of social cohesion and build the theoretical framework for this study, various academic and policy-oriented literature was analyzed and presented in the form of a matrix (tab. 1). The goal of this investigation was to find a common denominator in the broad variety of research and identify the guiding aspects for this study to be further pursued strictly within the area of the built environment.

The outcome of the framework matrix analysis pointed towards "social relations and participation", included within six out of seven investigated definitions, being the most prominent aspects of social cohesion. "Social relations and participation" are defined as "any relationship or interaction between two or more individuals and person's involvement in activities providing those interactions" (Cash & Tony-Butler, 2022; Schewade et. al., 2024, p. 142).

The second most important aspect of social cohesion turned out to be the "sense of belonging and a common identity", mentioned and phrased slightly differently in five out of seven investigated definitions. The "sense of belonging and a common identity" is defined as "a subjective feeling of deep connection with a social group, common interests, and shared experiences" (Allen et. al., 2021; Zhang et. al., 2017).

Author Aspect	OECOD	Council of Europe	Fonseca et. al.	Dragolov et. al.	Chan et. al.	Jenson	Schiefer & van der Noll
well-being							
sense of belonging & a common identity							
social relations & participation							
recognition and acceptance of differences							
equality of opportunities							
avoiding marginalization							
mobility							
achieving welfare							
connectedness							
trust							
focus on the common good							
cooperation							
legitimacy of social institutions							

Table 1. The framework matrix presenting different aspects of social cohesion and their imple-mentation within different academic and policy-oriented literature (OECOD, 2011; Council ofEurope, 2010; Fonseca et. al., 2019; Dragolov et. al., 2013; Chan et. al, 2006; Jenson, 2010;Schiefer & van der Noll; 2012)

The last two aspects, which were common for most of the literature, were the "recognition and acceptance of differences", in some studies called "tolerance", and "equality of opportunities", both included in four out of seven publications. The "recognition and acceptance of differences" is self-explanatory and refers to the acceptance of diversity within a social group, while "equality of opportunities" is defined as "a political idea according to which participants in some cooperative system should possess equal access to some advantages at some point in time" (Navin, n. d.).

The last one, the "equality of opportunities" is a concept difficult to attain within the area of architecture as it highly relies on the governmental bodies, and thus cannot be directly influenced by building design, but rather by large-scale urban planning and policy-making. Therefore, for the sake of this study the "equality of opportunities" is not included in the final theoretical framework.

The other three aspects, the "social relations and participation", the "sense of belonging and a common identity" and the "recognition and acceptance of differences" are included in the study and can be found further in the methodology matrix.

Methodological Framework

The methodological framework for the research is described below in the form of a diagram (fig. 2). The research is based on various case studies of different areas and time frames. Each case study is first analyzed to identify its suitability for further study. If a case study is suitable, meaning the space has a visible influence on one or more of the selected aspects of social cohesion, it will be further investigated regarding its structural design and architectural symbolism as well as indoor climate performance and sensory stimulation.

The first topic aims to examine the structural aspects of a building, its visual influence on a user, and possibly certain symbolic relations with the concept of social cohesion. The second topic aims to explore the feeling of the space, so the non-visual characteristics that may affect the behavior of a user through sensory stimulation, mainly manifesting themselves through the indoor climate performance of a building.

The outcome of the research will be utilized to create a framework of concepts that can be used as an inspiration for the design of architecture as a catalyst of social cohesion, in other words, the design of architecture that unites its users.

The necessity for ethical considerations within this study is very minor. The study does not involve human participants and thus, there is no risk of breach of confidentiality or need for informed consent. The one possible ethical issue might be the potential misuse of the outcome with the aim of designing a space negatively influencing social cohesion. Nevertheless, the probability of this risk is negligible, especially considering the fact that the built environment solely focused on efficiency and functionality seems to have already found the recipe for creating spaces against social cohesion.

Thematic research question

How did public and semi-public gathering places promote social cohesion in the past and in what ways did architecture influence that phenomenon?

Overall research question How can architecture become a universal catalyst of social cohesion?	Social cohesion	Thematic research		How do the previously identified	3	Required information	Relevance	Collection technique	Ways of analysis	fethodology matrix Expected results
		 Social relations & participation Sense of belonging & a common identity Recognition & acceptance of differences 		aspects of social cohesion materialize in public and semi-public gathering places?		Qualitative deepening of the knowledge based on both primary and secondary sources	Provides the knowledge necessary to identify the gathering places which had or still have influence on social cohesion and can be used as case studies	Case studies Literature studies	Summary and evaluation	An evaluation of the aspects of social cohesion in the context of the built environment and the gatheirng places
	Structural design & architectural symbolism (visual)	Themes: - Size & dimensioning - Shape & sense of space - Materiality, massing, color - Details of joinery/assembly		How did structural design and related to it architectural symbolism act as a catalyst of social cohesion in the public and semi-public gathering places of the past?		Qualitative deepening of the knowledge based on both primary and secondary sources	Privdes concepts which tangibly visualize how architcture contributed to social cohesion in the past	Case studies Literature studies	Visual examination of the studied cases & related texts in the context of previously listed themes (for themes look at the "Thematic research" box)	A framework of concepts which can be used as an inspiration for designing architecture as a catalyst of social cohesion
	Indoor climate performance & sensory stimulation (other than visual)	 Themes: Material, temperature, texture (touch) Ventilation, humidity, temperature (touch) Material & accoustics (sound) Material & humidity (smell) 		How did indoor climate performance and related to it sensory stimulation act as a catalyst of social cohesion in the the public and semi-public gathering places of the past?		Qualitative deepening of the knowledge based on both primary and secondary sources	Privdes concepts which tangibly visualize how architcture contributed to social cohesion in the past	Case studies Literature studies	Visual examination of the studied cases & related texts in the context of previously listed themes (for themes look at the "Thematic research" box)	A framework of concepts which can be used as an inspiration for designing architecture as a catalyst of social cohesion
	- Technicalities of universalization	 Themes: Volume and weight in transport Difficulty and time taken by assembly Sustainability in the use of materials 	The case studies, after establishing their impact on social cohesion, are simultaneously examin related architectural symbolism as well as indoor climate performance and related sensory stin organized chronologically and from a timeline of evolution of social cohesion in the						simultaneously examined on and related sensory stimulation	on. All the case studies are
		The conclusion section summarizes the outcomes of results and discussion, and establishes a framework of o be used as an inspiration for designing architecture as a catalyst								ork of concepts which can

Relevance

As the difficulty of attaining social cohesion grows with the increase in the diversity of members' backgrounds within a group, the current trend of globalization is becoming a threat to the unity of society (Moustakas 2023, p. 1029). The need to actively work towards fostering social cohesion in all areas of public life has never before been as relevant as it is now. The involvement of various policy-making bodies in the debate on social cohesion proves that the lack of solidarity within communities is becoming an apparent problem. Considering the influence that environments can have on the well-being and overall behavior of its users, the area of the built environment shall not be underestimated in combatting the problem of social cohesion. Ultimately each and every development designed to be used by people becomes a catalyst of social interactions, whether its primary function is a community center or not. Thus, the influence of the built environment on social cohesion is undeniable and needs to gain wider recognition in the current academic and professional realm.

Bibliography

Allen, K.-A., Kern, M. L., Rozek, C. S., McInerney, D. M., & amp; Slavich, G. M. (2021). Belonging: A review of Conceptual Issues, an integrative framework, and directions for future research. Australian Journal of Psychology, *73(1)*, *87–102*. https://doi.org/10.1080/00049530.2021.1883409

Cambridge Dictionary (n. d.). Cohesion. Retrieved on Novemver 17th 2023 from: https://dictionary.cambridge.org/ dictionary/english/cohesion

Chan, J., To, H.-P., & amp; Chan, E. (2006). Reconsidering social cohesion: Developing a definition and analytical framework for empirical research. Social Indicators Research, 75(2), 273-302. https://doi.org/10.1007/s11205-005-2118-1

nlm.nih.gov/books/NBK436023/

Domagala, M. (2023). Otwieramy dworzec metropolitalny, likwidujemy bałagan na Podzamczu. Hola, hola! Nie tak szybko. To skomplikowane. Gazeta Wyborcza Lublin. Retrieved on November 17th from: https://lublin.wyborcza. pl/lublin/7,48724,29755894,na-uporzadkowane-podzamcze-musimy-jeszcze-poczekac-otwarcie.html

Dragolov, G., Ignácz, Z.S., Lorenz, J., Delhey, J., Boehnke, K. (2013) Social Cohesion Radar: An International Comparison of Social Cohesion. Bertelsmann: Gütersloh, Germany.

Flap, M. (2022). Community Centers and the Future of Social Cohesion. Rijksuniversiteit Groningen. Retrieved on November 17th 2023 from: https://frw.studenttheses.ub.rug.nl/3863/

Fonseca, X., Lukosch, S., Brazier, F., (2019). Social cohesion revisited: A new definition and how to characterize it. Innovation: The European Journal of Social Science Research, 32, 231–253.

nurev.soc.30.012703.110625

Gorelick, N., Hancher, M., Dixon, M., Ilyushchenko, S., Thau, D., & Moore, R. (2017). Google Earth Engine: Planetary-scale geospatial analysis for everyone. Remote Sensing of Environment.

Jenson, J. (2010). Defining and Measuring Social Cohesion. Publications Section Commonwealth Secretariat, Marlborough House Pall Mall, London SW1Y 5HX, United Kingdom. ISBN: 978-1-84859-072-4

Kootstra, J. (2020). Socially oriented high-rise in the Netherlands. University of Groningen. Retrieved on November 17th 2023 from: https://frw.studenttheses.ub.rug.nl/3371/1/Socially-oriented high-rise design.pdf

Moustakas, L. (2023). Social cohesion: Definitions, causes and consequences. Encyclopedia, 3(3), 1028-1037. https://doi.org/10.3390/encyclopedia3030075

Navin, M. (n.d.). Equality of opportunity. Routledge Encyclopedia of Philosophy. https://doi. org/10.4324/0123456789-s116-1

Noordenbos, S. (2022). Social cohesion and interaction in high-rise buildings. Eindhoven University of Technology. Retrieved on November 17th 2023 from: https://pure.tue.nl/ws/portalfiles/portal/275277813/Noordenbos 0806302 ABP Kemperman MSc thesis.pdf

Organisation for Economic Co-Operation and Development. (2011). Perspectives on Global Development 2012: Social Cohesion in a Shifting World; OECD: Paris, France. ISBN 9789264113145.

Przystojecki, T. (n. d.). Ulica Lubartowska w Lublinie - historia ulicy. Osrodek Brama Grodzka - Teatr NN. Retrieved on November 17th 2023 from: https://teatrnn.pl/leksykon/artykuly/ulica-lubartowska-w-lublinie-historia-ulicy/#targ-zydowski

Research, 132, 579–603.

Shewade, H. D., Murthy, D. H. J., & amp; Mysore, S. (2024). Community participation for improving the coverage and quality of evidence-based public health practice. Principles and Application of Evidence-Based Public Health Practice, 141-151. https://doi.org/10.1016/b978-0-323-95356-6.00013-6

van Urk, R. (n. d.). How can a community center contribute to social cohesion?. University of Twente. Retrieved on November 17th 2023 from: https://essay.utwente.nl/71095/1/Urk BA BMS.pdf

Zhang, J., Hamilton, W. L., Danescu-Niculescu-Mizil, C., Jurafsky, D. & amp; Leskovec J. (2017). Community Identity and User Engagement in a Multi-Community Landscape. Proc Int AAAI Conf Weblogs Soc Media. 377-386.

rope: Strasbourg, France.

Cash, E. & Tony-Butler, T. J. (2022). Social Relations. Retrieved on November 17th 2023 from: https://www.ncbi.

Friedkin, N. E. (2004). Social cohesion. Annual Review of Sociology, 30(1), 409-425. https://doi.org/10.1146/an-

Schiefer, D. & van der Noll, J. (2017). The Essentials of Social Cohesion: A Literature Review. Social Indicators

Council of Europe. (2010). New Strategy and Council of Europe Action Plan for Social Cohesion. Council of Eu-