Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (<u>Examencommissie-BK@tudelft.nl</u>), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Bendert van Dijk
Student number	4698630

Studio				
Name / Theme	Architectural Design Crossovers			
Main mentor	Johan van Lierop Design mentor			
Second mentor	Florian Eckardt	Building Technology mentor		
Third mentor	Joran Kuijper	Research mentor		
Argumentation of choice	I am interested in the multi- inter- and intradisciplinary			
of the studio	approach that the studio endorses. I view this graduation			
	as my personal laboratory for deepening my interests and			
	expand my horizon beyond only the field of architecture.			

Graduation project					
Title of the graduation	From symbol to edifice: symbolism and atmospheres in				
project	Andalusí architecture.				
01					
Goal					
Location:	 Sites of inquiry the Alhambra, Granada; the great mosque, Córdoba; los viajes de agua, Madrid. 				
	Project site Acueducto Amaniel / Jardines de Carlos Paris, Tetuán, Madrid.				
Problem statement	Despite its rich heritage, the city of Madrid has very few artefacts of its Islamic past, and despite the city's Islamic origins, the authentic Andalusí architecture can only be found in the south of Spain.				
	Islamic architecture is known and renowned for its intricate ornamentation and richness in symbolism. To incorporate such qualities into contemporary architecture is more relevant than ever in a societal context in which architecture is comprised of pragmatic and functional spaces that are devoid of symbolism.				

Research focus

It is impossible to copy the "form language" of Islamic architecture without acknowledging the underlying cultural and religious symbols. My research will therefore focus on the way in which different forms of symbolism are translated into edifice within the tradition of Andalusí architecture. These "modes of translation" will then serve as a basis for translating contemporary notions of symbolism into a contemporary design project.

Following the historical importance of water within Madrid, I place a particular focus on water as a bearer of symbolism and consequently I have chosen my project site and programme accordingly. The role of water is especially great in the Alhambra – one of the case studies I have researched and visited during the excursion to Spain.

Research questions

My research paper is divided into three parts, incrementally expanding upon the topic of translating symbol into edifice.

Main research questions

- In what ways are meaning and symbolism translated into edifice in Andalusí architecture?
- What if these ways of translation were to be applied to contemporary architecture?

I Symbol

- Which notions of symbolism exist within Islamic architecture?
- What are the seven principles of Islamic architecture?
- Which role does water play in the symbolism of Andalusí architecture?

II Form

- How is symbolism translated into form within Andalusí architecture?
- How are notions of symbolism visible within the great mosque of Córdoba and the Alhambra in Granada?
- What are the modes of translation?

III Atmosphere

- How is symbolism manifested into atmospheres within Andalusí architecture?

	- What role is given to the phenomenological qualities of water in the creation of atmospheres in Andalusí architecture?
Design assignment	Regarding the great historic significance of water within the city of Madrid and the infrastructure that is still present at my chosen project site, I have defined the programme around water as protagonist. Drawing from the typologies of the Islamic and Roman civilisations, I have set out to resuscitate the typology of the bathhouse as a place of communal bathing and relaxing. The architectural ensemble should provide the city of Madrid with an urban oasis that is able to deal with the worsening heat stress that the city is facing every summer, while providing a place for socialising and celebrating the heritage of water within Madrid. The design incorporates the modes of translation identified in my research paper and applies them to contemporary notions of symbolism, enriching the architecture.

Process

Method description

As mentioned above, my research paper is divided into three parts: symbol, form and perception. Through this distinction, I gradually expand upon the topic of symbolism, its translation into built form and the way in which this translation is ultimately perceived by the beholder.

I first study the symbols of Islamic architecture by means of literature review. Next, in part two, I venture into the manifestations of these symbols by studying two case studies: the great mosque of Córdoba and the Alhambra in Granada. Subsequently I identify the different modes of translation that are used in these examples of Andalusí architecture: descriptive, prescriptive, arithmetical and manifestative. In the last part, I elaborate upon the creation of atmosphere and how atmospheric design can be used to enrich an architectural design project. Here I also expand upon the phenomenology of water and the way in which its symbolic qualities are amplified by its physical qualities.

In my methodology I place great importance upon not copying elements of Andalusí architecture without duly acknowledging and appreciating the underlying symbolic, cultural and religious heritage. By no means do I wish to imitate Islamic architects, as I oppose the idea of a "form language" without there being an overarching context that has to be taken into account.

Reflection

The research topic of translating symbolism into architecture has been inspired – in part – by the studio's focus on the multidisciplinary design approach that aims to incorporate both material and immaterial conditions into the design of an architectural intervention. Both my design and research methodology are underpinned by the concept of the constructed site, where the considered set of conditions exceed those physically and temporally associated with the project location and aim to regard the entire cultural and historical palimpsest that underlies any site.

Because of this approach, the architectural project is rooted in and informed by the cultural and historic context into which it is placed. This rootedness is very relevant in the master track of Architecture but also in the greater architectural practice as a whole, granting designers with the tools to enrich space by acknowledging and embracing the traditions and symbolism that precedes it. Moreover, with a dominating building tradition that has increasingly disregarded its own environmental impact, combined with an ever increasing temperature in the densely populated metropoles, it is more relevant than ever to learn from the resilience of Islamic typologies and the way in which the Islamic building tradition deals with heat stress.

The multiplicities of historic and cultural context that I aim to address in my research tie into the core values of the master programme Architecture, Urbanism and Building Sciences, namely equipping students with a multidisciplinary toolbox to tackle the pressing issues the world is facing today.

Even though a lot of literature has been published on the topic of Islamic architecture and its symbolism, my approach offers a new angle by addressing the relation between symbolism and built form. Where most research merely describes the symbols of Islam or, alternatively, the "form language" of Islamic architecture, I relate the two concepts and thereby hope to offer insight into why Islamic architecture is so effective at conveying its underlying symbols through edifice.

Bibliography

Primary sources are depicted in bold text

Abbasov, I. B. (2019) *The psychology of visual perception*. Amazon digital publishers. Accessed from https://www.researchgate.net/publication/330215545 Psychology of Visual Perception on 18-09-2023.

Ali, A. & Utaberta, N. (2012) *Architecture in the Islamic civilisation*. Journal of Islamic Architecture, 2(2), 52-60. Doi: 10.18860/jia.v2i2.2202

Bachelard, G. (1983) Water and dreams: An Essay on the Imagination of Matter (E. R. Farrell, Trans.). Original work published 1942. Accessed on 28-11-2023 from https://www.are.na/block/3439412

Barrucand, M. & Bednorz, A. (1992) Moorish architecture in Andalusia. Cologne: Taschen.

Bloom, J. (2020) *Architecture of the Islamic West: North Africa and the Iberian Peninsula, 700 – 1800.* New Haven: Yale University Press.

Broug, E. (2013) Islamic geometric design. New York: Thames and Hudson.

Collins R. (1983) Early Medieval Spain: Unity in Diversity, 400-1000. London: MacMillan

Erwine, B. (2016) *Creating sensory spaces: the architecture of the invisible*. London: Routledge publishing.

Fletcher, R. A. (1985) *Review of Early Medieval Spain: Unity in Diversity, 400-1000*, by R. Collins. The English Historical Review, 100(394), 122–124. http://www.jstor.org/stable/569931

Grabar, O. (1987) The Alhambra. London: Allen Lane.

Graves, M. (1982) *Buildings and projects 1966 – 1981: A case for figurative architecture.* New York: Rizzoli.

Goita, F. C. (1999) *El agua y el arte* (Google, Trans.) Arbor, 164(646), 285–297. Accessed from https://arbor.revistas.csic.es/index.php/arbor/article/view/1591 on 27-11-2023. Doi: 10.3989/arbor.1999.i646.1591.

Harari, L. (2019) De magneet. Amsterdam: Scratchbooks publishing.

Hirschkind, C. (2014) *The contemporary afterlife of Moorish Spain*. Accessed from https://escholarship.org/uc/item/5r09m4tc on 26-09-2023.

Irving, W. (1832) *Tales of the Alhambra*. Accessed from https://pinkmonkey.com/dl/library1/irvng001.pdf on 18-12-2023.

Jung C. et al (2021) *Analysis of Peter Zumthor's emotional architecture in Therme Vals*. International Journal of Advanced Research in Engineering Innovation 3(3), 98-111. Accessed from https://myjms.mohe.gov.my/index.php/ijarei/article/view/16027 on 13-12-2023.

Moller, V. (2019) The map of knowledge. London: Picador publishing.

Moustafa, N. (2008a) *Divine inspiration: seven principles of Islamic architecture*. Kuala Lumpur: IAMM Publications.

Moustafa, N. (2008b, December 18). Divine Inspiration - Seven Principles of Islamic Architecture explores the relationship between Muslims and their beliefs, manifested in the built environment. Just as Islam embodies a way of life and serves as a cohesive force amongst ethnically and culturally diverse peoples, it also contains a conspicuous aesthetic dimension. LinkedIn. Retrieved December 14, 2023, from https://uk.linkedin.com/in/nisreen-moustafa-8a5b71a7

Nejad J. et al (2016) A study on the concepts and themes of color and light in the exquisite Islamic architecture. Journal of Fundamental and Applied Sciences, 8(3), 1077-1096. Doi: 10.4314/jfas.v8i3.23

Ribeiro, H. & Fransisco, A. (2018) *Creating introspective atmospheres: water as an architectural element*. Accessed from

https://www.researchgate.net/publication/365893614 Creating introspective atmospheres water as an architectural_element_comunicacao_oral on 13-12-2023, translated using Google Translate.

Ruiz, A. (2012) Medina Mayrit: the origins of Madrid. New York: Algora Publishing.

Samalavicius, A. (2022) *Architecture, water and well-being in Islamic culture and beyond*. Journal of Architecture and Urbanism, 46(2), 191–198. Doi: 10.3846/jau.2022.17593

Spence C. (2020) *Senses of place - architectural design for the multisensory mind*. Journal of cognitive research 5(46). <u>Doi: 10.1186/s41235-020-00243-4</u>

al-Sultani, K. (2012) *Architectural intertextuality: architecture as acceptance of 'the other'*. Copenhagen: School of architecture publishers.

The Qur'an, 9:72 (Saheeh International, Trans.). (n.d.). Accessed from https://quran.com/9/72?translations=17,18,19,20,22,84,85,21,95,101 on 19-12-2023.

Von Hantelmann, C. (2001) *Gardens of Delight: the great Islamic gardens*. Cologne: Dumont Buchverlach.

Wade, D. & Wichmann, B. (2017) *Islamic design: a mathematical approach*. Accessed from https://link-springer-com.tudelft.idm.oclc.org/book/10.1007/978-3-319-69977-6 on 13-12-2023.

Webb, J. & Webb, L. (2022) *Water and dreams*. TEXT journal, 26 (special 68), 1-20. Doi: 10.52086/001c.57572