PRINCIPLES FOR DESIGNING A CHURCH IN MULTICULTURAL CONTEXT

HO WYN GY

A dissertation submitted in fulfilment of the requirements for the award of the degree of Master of Architecture

Faculty of Built Environment Universiti Teknologi Malaysia To my dearest parents who always believe in me

To my wonderful sister whom has always been supportive

ACKNOWLEDGEMENT

First of all, I would like to express my deepest appreciation to my helpful supervisors Dr. Abdul Halim Hussein and Assoc. Prof. Dr. Syed Ahmad Iskandar Syed Ariffin . The help and support throughout the whole process had tremendously helped me to complete this research smoothly.

Besides that, I would like to express my sincere appreciation to my fellow friends who helped me along the way giving support and help. The support and advice they gave me helped me a lot in the completion of this project.

Finally, my gratitude extends to all my family members for the support they gave me all the time. I truly appreciate the support they gave me.

ABSTRACT

Religious harmony in multicultural society is important. Throughout the history, religion is considered to be the fault line in diverse society. Malaysia is a multiracial country that embraces diversity but racial tensions still prevails. Unfortunately, the current churches in Malaysia are not reflecting the Christian image of interacting with multicultural society. The concept of Christianity as a harmonious religion has been taken lightly. On the other hand, church architecture style which is a reflection of the physical manifestation Christianity remained unchanged for centuries and imitated blindly constantly. The churches in Malaysia are not expressing a progressive image of Christianity towards diversity and universality. This research studies about the universal values of Christianity that is suitable for enhancing harmonious interaction with humanity, nature, and spiritual self. The objective of this research is to study the influence and applicability of Christian universal values into church architecture. The research uses case studies method to highlight the expression and characteristic of universal values in church architecture. The universal values are examined through traditional and selected modern churches. The findings revealed that there are four applicable principles when designing a church in multicultural society. The principles are: harmony with all men; harmony with nature; versatility in acceptance of others; and respect towards heritage or the past. These design principles and methods can be said to be timeless in nature, applicable to a church architecture in multicultural society.

ABSTRAK

Keharmonian agama dalam masyarakat majmuk amat penting. Sepanjang sejarah, agama dianggap sebagai pencetus konflik dalam masyarakat majmuk. Malaysia merupakan sebuah negara berbilang kaum yang harmoni tetapi ketegangan kauman tetap wujud. Tambahan, gereja di Malaysia tidak mencerminkan imej Kristian yang berbuka berbuka kepada masyarakat setempat. Konsep memaparkan agama Kristian sebagai agama yang harmoni telah dipandang ringan. Di samping itu, gaya seni bina gereja yang merupakan imej Kristian kekal tidak berubah selama ini dan gaya traditional ditiru dengan rakus. Sehubungan itu, gereja-gereja di Malaysia tidak memaparkan imej Kristian sebagai agama yang progresif dan mementingkan keharmonian kesejagatan. Kajian ini adalah untuk mengkaji nilai-nilai universal dalam agama Kristian yang sesuai untuk meningkatkan keharmonian antara manusia dengan manusia, manusia dengan alam semula jadi, dan rohani sendiri. Objektif kajian ini adalah untuk mengkaji pengaruh dan kesesuaian nilai-nilai universal Kristian dalam seni bina gereja. Kajian ini menggunakan kaedah kajian kes untuk mengetengahkan ciri-ciri nilai universal terdapat dalam seni bina gereja. Nilai-nilai universal akan dikaji melalui gereja traditional serta gereja moden yang dipilih. Pendapatan kajian ini menunjukkan bahawa terdapat empat prinsip berkenaan dengan nilai universal yang bentuk sebuah gereja dalam konteks masyarakat majmuk. Empat prinsip tersebut adalah: keharmonian dengan manusia; keharmonian dengan alam semula jadi; versatil dan terbuka kepada semua aspek; dan menghargai warisan tradisi Prinsip-prinsip reka bentuk dan kaedah dikaji boleh dikatagorikan sebagai prinsip yang abadi, serta sesuai untuk diaplikasikan pada seni bina gereja dalam masyarakat majmuk.

TABLE OF CONTENT

CHAPTER	TITLE		PAGE
	DEC	LARATION	v
	DED	ICATION	vi
	ACK	NOWLEDGEMENT	vii
	ABS	TRACT	viii
	ABS'	TRAK	ix x xv
	TAB	LE OF CONTENT	
	LIST	T OF TABLES	
	LIST	T OF FIGURES	xvii
1	INTI	RODUCTION	
	1.1	Background of Problem	1
	1.2	Statement of the Problem	1
	1.3	Research Aim and Objectives	2
	1.4	Research Questions	3
	1.5	Significance of Study	3
	1.6	Scope of Research	3
	1.7	Thesis Structure	4
	1.8	Research Operational Framework	5
	1.9	Summary	6
2	LITI	ERATURE REVIEW	
	2.1	Introduction	7
	2.2	Christianity and Universality	8
	2.3	Christian Universality and Diverse Society	11
	2 4	Style in Church architecture	11

	2.5	Sacred characteristic and qualities of	
		Church architecture	13
		2.5.1 Sacred and Mundane space	14
		2.5.2 Symbolism in Church architecture	16
		2.5.3 Church and Primordial Nature	18
		2.5.4 Sacred path and Church	22
		2.5.5 Church sacred geometry	24
		2.5.6 Ambiance Factor in Church Architecture	25
	2.6	Development of Church Building and Christianity	27
	2.7	Summary	32
3	RES	EARCH METHODOLOGY	
	3.1	Introduction	35
	3.2	Research Paradigm	35
	3.3	Research Design	36
	3.4	Research Procedure	37
		3.4.1 Data Collection Procedure	38
		3.4.2 Data Analysis	39
	3.5	Summary of Research Methodology	39
4	CAS	E STUDY	
	4.1	Introduction	40
	4.2	Unity Temple, Chicago, USA	40
		4.2.1 Mass and form	41
		4.2.2 Ornaments and Materials	42
		4.2.3 Wall and Fenestration	44
		4.2.4 Floor and Site Plans	45
		4.2.5 Features and Interiors	46
	4.3	First Unitarian Society Meeting House,	
		Madison, Wisconsin, USA	47
		4.3.1 Mass and Form	48
		4.3.2 Ornaments and Materials	49
		4.3.3 Wall and Fenestration	50
		4.3.4 Floor and Site Plans	51

		4.3.5	Features and Interiors	52
	4.4	The P	ilgrimage Chapel of Notre Dame	
		Du Ha	aut, Ronchamp, France	53
	4.4.1	Mass	and Form	54
		4.4.2	Ornaments and Materials	55
		4.4.3	Wall and Fenestration	56
		4.4.4	Floor and Site Plans	58
		4.4.5	Features and Interiors	60
	4.5	The P	arish Church Saint Pierre, Firminy, France	60
		4.5.1	Mass and Form	61
		4.5.2	Ornaments and Materials	62
		4.5.3	Wall and Fenestration	63
		4.5.4	Floor and Site Plans	64
		4.5.5	Features and Interiors	66
	4.6	Summ	nary	67
5	FIND	INGS A	AND DISCUSSION	
	5.1	Introd	uction	68
	5.2	Summ	nary of Traditional Church Architecture	
		and U	niversal values	68
	5.3	Summ	nary of Case Studies	72
		5.3.1	General Characteristics	74
		5.3.2	Design Criteria according to Christian	
			Universal Values	75
	5.4	Applie	cation into Architectural Design	79
	5.5	Summ	nary	92
6	CON	CLUSI(ON AND RECOMMENDATION	
	6.1	Introd	uction	93
	6.2	Purpo	se of the study	93
	6.3	Key fi	ndings	94
	6.4	Limita	ations	97
	6.5	Recon	nmendations	98

REFERENCES	99
APPENDIX A	103

LIST OF TABLES

TABLE NO.	TITLE	PAGE
1	Thesis flow chart	5
2	Universal values in Christianity	10
3	Summary of traditional church design and	
	universal value	33
4	Approaches of qualitative research	36
5	Research design framework	37
6	Summary of traditional church design and	
	universal value	69
7	Comparison of design language	72
8	Summary of universal values principles in	
	church architecture	74
9	Summary of design language	79
10	Summary of strategy 1	83
11	Summary of Strategy 2	86
12	Summary of Strategy 3	90
13	Summary of traditional church design and	
	universal value	94
14	Summary of universal values principles in	
	church architecture	96
15	Summary of design language	97

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
1	St. Mary's church, Lubeck, Germany	15
2	Sagrada Familia, Barcelona	15
3	Communicative symbolism at west facade of	
	Cathedral Church of Saint Andrew, England	17
4	Communicative symbolism at Saint Conques's	
	western	18
5	Naturally lit interior and altar	18
6	Interior of Hagia Sophia	20
7	Cathedral of Christ the Light	20
8	Church on the Water by Tadao Ando,	
	Tomamu, Japan	21
9	Floral motifs all over Theatine Catholic	
	Church, Munich	22
10	San Clemente ancient apse	22
11	Labyrinth in Chartres Cathedral, France	23
12	The labyrinth in Boxgrove church, Sussex	23
13	Santa Sofia, combination of square and circular	25
14	House-Church at Dura Europos, Syria	27
15	Standard design of a longitudinal Roman basilica	28
16	4th century church basilica 28	
17	Openly interacting Alcobaça Monastery,	
	Alcobaça, Portugal	29
18	Monastery of San Lorenzo de El Escorial.	
	Madrid near to village	29
19	Verticality elements in Milan Cathedral, Italy	30

xvi

20	Light vault structure de-emphasizes material in			
	interior structure of Laon Cathedral, France	30		
21	Santa Maria Novella, Florence, façade proportioning32			
22	Saint Benedict's Abbey, Vaals with sectional			
	proportion module	32		
23	Exterior view from main street and side view	41		
24	Exterior perspective of Unity Temple	42		
25	Geometric ornaments on the columns	43		
26	Main prayer hall of Unity Temple	45		
27	Plan of Unity Temple and Unity House	45		
28	Section of main prayer hall	46		
29	Church with the nature context	47		
30	Aerial view of Madison Church	48		
31	Materials that used in the church	49		
32	Huge window at altar invites daylight	50		
33	Madison Church floor plan	51		
34	Interior expression of lighting	52		
35	Exterior view of Ronchamp Chapel	53		
36	Sense of grounded and permanence with the			
	massing	55		
37	Modest bare exposed concrete and stained			
	glass as the only ornaments	56		
38	Stained glass effect from aperture	57		
39	Square opening on altar wall shines light			
	into sanctuary	58		
40	Three towering light chapel	58		
41	Romchamp Chapel floor plan	59		
42	Exterior view of Santa Pierre Church with plaza	60		
43	Referencing the mountain site	61		
44	Breaking of huge massing	62		
45	Light box on top reference stained glass effect	64		
46	Orion constellations reference the universe	64		
47	Floor plan of Santa Pierre Church	65		
48	Interior ambience of Santa Pierre Church	66		

49	Different types of pew for selection	67
50	Aerial view of the church design	80
51	Longitudinal section	80
52	Ground floor plan of church design	81
53	Proposed building program for the church	82
54	Youth spiritual development	85
55	Site planning (a) Site planning (b) Site planning(c)	87
56	Spatial hierarchy of church	88
57	Conceptual of verticality of church design	88
58	Conceptual of symbolism of pointed architecture	89
59	The conceptual for church geometry	89
60	Conceptual for togetherness with nature	90

LIST OF APPENDICES

APPENDICES NO.	TITLE	PAGE
A	Presentation Drawings	103

CHAPTER 1

INTRODUCTION

1.1 Background of Problem

Malaysian society is divided by "walls" that insulate them from listening to what others have to say about us and about themselves (Chong, 2013). This proves that throughout more than a century of independence, our society is still divided along racial and religious lines which led to the attitude of ignorance, culture of exclusion, and unwillingness to listen to others who are different.

The national curriculum is not putting much effort in religious education and the schools are not promoting a multiracial environment and the importance of youth's social development. Coupled with the effect of globalization, the Malaysian society is becoming increasingly materialistic and consumerism has made the people more individualistic and lacking in the spirit of togetherness in our society. Thus the advancement in lifestyle has given rise to "the culture of exclusion" according to Pope Francis in his World Day of Peace speech (Sri, 2014).

1.2 Statement of the Problem

Although religion is a universal practice, often societies view religion as something that is private. Especially in Malaysia's multi-cultural society, churches are moderately expressing faith outwardly in politic, culture and society (Khuen, 2009). Multicultural society is the special characteristic of Malaysia where multiracial co-exists in a country. Unfortunately, churches in Malaysia are not

expressing a progressive image of Christianity towards diversity and universality. Fundamentally, Christianity affirmation of universality is clearly expressed in its Scripture and doctrine.

"In the Last Days, I will pour out from my Spirit upon everyone. Your sons and daughters will prophesy, your young men will see visions, your old men will dream dreams. Even on my servants, both men and women, I will pour out my Spirit in those days" - Prophet Joel (New International Version, 2011).

Christianity provided a set of universal values as the code of conduct in Holy Bible. The Ten Commandments laid down norms about how human beings should relate to God, to the cosmos, and to other human beings which guide human life towards truth, justice, peace and love. Most of these universal values relevant to current diverse society are not clearly celebrated and expressed in most churches in Malaysia.

Unfortunately, most Malaysian churches are imitating the image, typology and languages of Western churches only but there is no single style or image imposed by Christian doctrine. Churches are free to express itself according to conditions of people and the needs of rites as long as the church architecture honor the sacredness of building and rites (Stroik, 1998).

1.3 Research Aim and Objectives

The aim of this research is to identify a set principal S and languages that are suitable for designing a church for youth in multicultural context of Malaysia. In order to achieve this aim, this research argues that the universal principles can be identified through the characteristics and components of church architecture. The aim described above is explored within the following three research objectives:

1. To investigate the general expression of Christian universal values in traditional church architecture

- 2. To examine the manifestation of Christian universal values and concepts from modern church architecture.
- 3. To propose a set of church architectural principles and language that are suitable for multicultural context

1.4 Research Questions

Based on the background studies, the following are the research questions:

- 1. What are the Christian universal values in traditional church architecture?
- 2. What are the Christian universal values affecting the characteristic and expression of modern church architecture?
- 3. How to design a church which is suitable in a multicultural context?

1.5 Significance of Study

The significance of this study is to demonstrate the universality of church architecture. Churches especially Asian churches need to recognize the plurality of its context and respond to it. A suitable church architecture that blends well into local context without losing the originality of church sacredness is important. Thus, this study is important to find the appropriate architectural language to showcase Christian as a harmonious religion.

1.6 Scope of Research

Throughout the study of the universal values in Christianity, the concept of Nature, Democracy and Freedom is prominent. According to Kevin Nute (1996), the concept of nature is the environmental adaptation with architecture. The concept of democracy and freedom are the metaphysical and social interpretation within architecture, and the holistic approach in designing architectural aesthetic wholly.

Frank Lloyd Wright and Le Corbusier have already implemented these universal concepts in their respective sacred buildings especially the Unity Temple in Wisconsin and Notre Dame du Haut in Roncham (Siry, 1996; Dummett, 2007). Therefore, this research will study on the modern 20th century churches designed by Frank Lloyd Wright and Le Corbusier.

This research does not scope down to any specific Christian denominations and intend to respond to the Christians at large.

1.7 Thesis Structure

This thesis consists of 6 chapters. Chapter 1 introduces the intention of the research and the overview of it. The chapter explains the problem background, problem statement, research aim, research problems, research objectives, and scope of study.

Chapter 2 is the literature review of the study. The literature review covers the background of universal values in Christianity and church architecture. The first section explains meaning of universal values in Christianity and the relevance to diverse society. The following sections review the characteristic of church architecture in relation to universal values in Christianity and the applicability of the values.

Chapter 3 discussed the research methodology of the study and explains the procedure in conducting the research to achieve the research aim. Chapter 4 is the study of selected modern church architecture relevant in this research. The case studies are conducted according to the framework derived from methodology and scope of literature review. Relevant information and aspect regard ing the research will be highlighted for further analysis.

Chapter 5 presents the findings and analysis of case studies. Data will be analyzed and explained to achieve the aim. The chapter ends with architectural principles in line with the research to propose design strategies to achieve the aim. Chapter 6 is

the summary of all chapters and the research. Findings from the research will be summarized. Limitation and recommendation for further studies will be presented as well.

1.8 Research Operational Framework

The flow of the research is explained in the following Table 1:

Start Review of Universalisal value of Development of churh Characteristics of Church architecture architecture Christianity Qualities of church architecture that is universal and suitable in relation to multicultural context Data collection 1. Collection of universal values within religious building 2. Comparison of church architecture expression in relation Christian universality value A church architecture that is suitable for multicultural context in Malaysia End

Table 1: Thesis flow chart (Source: Author, 2016)

1.9 Summary

This study explores the adaptability of church architecture in multicultural context. This chapter heighted the focus on the study of universal values in Christianity and the applicability of it in church architecture to create a church that is suitable in c multicultural context.

REFERENCES

- ADAGP. (n.d). Chapelle Notre Dame du Haut, Ronchamp, France, 1950 1955.

 Available from fondation le corbusier:

 http://www.fondationlecorbusier.fr/corbuweb [25 December 2015]
- Adamcik, M. J. (1985). roman catholic church in desoto texas. Texas: Texas Tech University.
- Barrie, T. (2010). The Sacred In-Between: The Mediating Roles of Architecture. New York: Routledge.
- Boe, S., Faber, H. C., & Strandhagen, B. (2014). Raw: Architectural Engagements With Nature. Farnham: Ashgate Pub Co.
- Brown, E. C. (2006). Dissertation. Available from: Eli Collins-Brown: Teaching, Learning & Technology: http://www.elicbrown.com/ [20 December 2015]
- Camhi, N. (2012). The Manipulation of Sacred Places: The Role of Jerusalem's Temple Mount in the Construction of Identity. Wesleyan: Wesleyan University.
- Ching, F. D. (2007). Architecture: Form, Space, and Order. New York: John Wiley & Sons.
- Chong, C. (2013). Healing a Diveided Nation. Available from: Friends in Conversation: https://friendsinconversation.wordpress.com/2013/08/23/healing-a-divided-nation-2/ [20 December 2015]
- Dahabreh, S. M. (2006). The Formulation Of Design: The Case Of The Islip Courthouse By Richard Meier . Georgia: Georgia Institute of Technology .
- Davies, M. (1997). The Catholic Sanctuary: And the Second Vatican Council. North Carolina: TAN Books.
- Demetrescu, C. (2000). Symbols in Sacred Architecture and Iconongraphy. Available from:

 Sacred Architecture Journal:

 http://www.sacredarchitecture.org/articles/symbols_in_sacred_architecture_a

 nd_iconongraphy/ [5 December 2015]
- Dunlop, B. (1999). Frank Llyod Wright. London: Phaidon.

- Emerson, R. W. (1841). The Over-Soul. Available from: Ralph Waldo Emerson Texts: http://www.emersoncentral.com/oversoul.htm [15 December 2015]
- First Unitarian Society of Madison. (2015). The Unitarian Meeting House. Available from: First Unitarian Society of Madison: https://www.fusmadison.org/meetinghouse [22 November 2015]
- Gans, D. (2006). The Le Corbusier Guide. New York: Princeton Architectural Press.
- Geva, A. (2012). Frank Lloyd Wright's Sacred Architecture: Faith, Form and Building Technology. New York: Routledge.
- Hammond, P. (2011). Liturgy And Architecture. Charleston: Nabu Press.
- Harvey, J. W. (1923). The Idea of the Holy. Oxford: Oxford University Press.
- Horn, J. (2007). The Last Architecture Pope's Last Blessing. In Santa Fe Trend (pp. 54-56). Cynthia Canyon.
- Khuen, Y. Y. (2009). A Christian Response to the Socio-Economic and Political Uncertainties in Malaysia. Available from: The Micah Mandate: http://www.themicahmandate.org/2009/06/a-christian-response-to-the-socio-economic-and-political-uncertainties-in-malaysia/ [10 November 2015]
- Kilde, J. H. (2005). When Church Became Theatre: The Transformation of Evangelical Architecture and Worship in Nineteenth-Century America . Oxford: Oxford University Press.
- King, P. E. (2008). Religion and Spirituality in Adolescent Development. Handbook of Adolescent Psychology, 435-478.
- Kinnier, R. T., Kernes, J. L., & Dautheribes, T. M. (2000). A Short List of Universal Moral Values. Counceling and Values.
- Kleinschmidt, B. (1992). Windows in Church Architecture:In The Catholic Encyclopedia. Available from: New Advent: http://www.newadvent.org/cathen/15653b.htm [22 November 2015]
- Koliński, F. D. (2014). Facing East Toward the Rising Sun of History. Available from: from Good books media: http://www.goodbooksmedia.com/3/post/2014/08/facing-east-toward-the-rising-sun-of-history.html [1 September 2015]
- Kroll, A. (2010). AD Classics: Ronchamp / Le Corbusier. Available from: ArchDaily: http://www.archdaily.com/84988/ad-classics-ronchamp-le-corbusier [5 November 2015]

- Lepine, A. (2012). Firminy Vert: Le Corbusier and Ineffability. Available from: Heartecture: https://heartchitecture.wordpress.com/2012/03/11/firminy-vert-le-corbusier-and-ineffability/ [23 November 2015]
- Liver, S. (2007). Universality:From Theory To Practice,An Intercultural And Interdisciplinary Debate About Facts, Possibilities, Lies And Myths. Cambridge: Academic Press.
- McKay, F. S. (1979). A study of Le Corbusier's Nôtre-Dame-du-Haut, Ronchamp as a twentieth-century pilgrimage chapel. University of British Columbia.
- Meyrat, J. (2014). Why Modern Architecture Struggles To Inspire Catholics.

 Available from: New Geography:

 http://www.newgeography.com/content/004497-why-modern-architecturestruggles-inspire-catholics [23 November 2015]
- Nelson, E. (2010). A City Campus Heterotopia. Where is the wisdom we have lost in knowledge? Exploring meaning, identities and transformation in HE. London: Routledge.
- New International Version. (2011). Bible Gateway. Available from: https://www.biblegateway.com/passage/?search=Joel+2%3A28-29&version=NIV;KJV [9 November 2015]
- New International Version. (2011). Holy Bible. Biblica Inc.
- Nute, K. (1996). Wright the Architect. California: Pomegranete Artbook.
- Quddus, S. (2014). Material Masters: Le Corbusier's Love for Concrete. Available from: ArchDaily: http://www.archdaily.com/574981/material-masters-le-corbusier-s-love-for-concrete [3 December 2015]
- Regester, J. (n.d.). Symbolic Ornaments of the Church. Available from: Biblehub: http://biblehub.com [20 December 2015]
- Righini, P. (2000). Thinking Architecturally: An Introduction to the Creation of Form and Place. Cape Town: Univ of Cape Town Press.
- Samuel, F., & Linder-Gaillard, I. (2013). Sacred Concrete. Birkhaeuser .
- Schloeder, S. J. (1998). Architecture in Communion: Implementing the Second Vatican Council Through Liturgy and Architecture. San Francisco: Ignatius Press.
- Schmelzer, K. (2012). A phenomenology of The Chapel at Ronchamp. Available from: http://keithschmelzer.com/ [25 November 2015]

- Siry, J. M. (1996). Unity Temple: Frank Lloyd Wright and Architecture for Liberal Religion. UK: Cambridge University Press.
- Smith, H., & Griffin, D. R. (1989). Primordial Truth and Postmodern Theology. New York: State University of New York.
- Sri, E. P. (2014). The Art of Living: Pope Francis and the Culture of Encuentro.

 Available from: Catholics United for the Faith:

 http://www.cuf.org/category/cuf-resources/lay-witness-archive/mayjune2014/ [18 November 2015]
- Stegers, R. (2008). Sacred Buildings: A Design Manual. Berlin: Birkhauser.
- Stroik, D. G. (1998). Ten Myths of Contempory Church Architecture. Available from:

 Sacred Architecture Journal:

 http://www.sacredarchitecture.org/articles/ten_myths_of_contempory_church

 _architecture [1 December 2015]
- Verkaaik, O. (2012). Designing the 'anti-mosque': identity, religion and affect in contemporary European mosque design. European Association of Social Anthropologists, 161-176.
- Wardell, B. R. (2004). A Short History of Church Building. Available from:

 BWRARCHITECTS: http://www.brw-architects.com/wp-content/uploads/2011/11/BRW_Short-Church-History.pdf [25 November 2015]
- Wilson, L. P. (1998). New England Transcendentalism. Available from: William Munroe Special Collections: http://www.concordlibrary.org/scollect/essays/transcendentalism.html [12 November 2015]
- Wright, F. L. (1986). Letters to Clients. Fresno: California State University.