

Maharishi Vedic Architecture and Quality of Life: An International Mixed Methods Study of Lived Experience

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ABSTRACT: The histories of architectural design and town planning are replete with references to creating a better quality of human life. One of the approaches to enhancing human existence is *Vāstu Vidyā*, the knowledge of design and building from the ancient Vedic tradition. More recently, *Vāstu Vidyā* has been repurposed to include not only architectural practice and construction but also considered in light of the consciousness of the designer and builder and the need for a more ‘enlightened’ approach to design. Such a consideration is called Maharishi Vedic Architecture (MVA). Some of the features of MVA include a concern for orientation of the building to cardinal east, the position and proportion of rooms within the dwelling, and considerations of slope and relation to the early morning sun. Such features are said to enhance the creativity, health, and happiness of occupants.

The purpose of the present study is to explore the experiences of individuals who reside in homes designed according to the principles of MVA. Triangulated quantitative and qualitative results from an international mixed-methods survey of 158 individuals in 14 countries indicate this approach to architectural design contributes to individual and family quality of life, specifically as it has been operationalized to mean changes in well-being, health, personal development, and success. On a quality-of-life scale, the study found a statistically significant difference between those living in MVA for more than three years compared to those living in MVA for less than three years ($F = 1.89, p = .02$).

Keywords: *Maharishi Vedic Architecture, quality of life, Vāstu, lived experience, mixed methods research.*

INTRODUCTION

The association of architecture with quality of life has been systematically explored in many settings. For example, Bardhan et al. (2018) examined low-income housing in India and concluded that socio-architectural and wind-flow metrics, such as natural ventilation, can promote a better quality of life; Silva et al., (2018, 704) maintained that smart cities around the world, as opposed to more conventional ones, help humans “utilize and grow their potential” and “[are designed] to uplift the quality of life of residents”; and Hui (2017) considered the quality of life and its link to housing and urban renewal in China. Such an association extends to landscape architecture in Saudi Arabia (Addas, 2018) and interior design in Australia (Smith

et al., 2012), and includes recent developments like service-oriented architecture in the context of gardening (Kavitha et al., 2018) and architecture which aims to improve the lives of elderly residents in Hong Kong (Leung et al., 2019), with Feng Shui being one of the more popular forms of architectural design concerned with the quality of life (Madeddu & Zhang, 2017).

Less well known, but equally important, are the ancient architectural principles and practices of India (Nathan, 2015; Venugopal, 2012), a design and construct history which has influenced many other countries in the region (e.g., Bonshek & Hamill, 2017; Lah et al., 2015). These principles and practices have their origins in the Vedic tradition, specifically in *Sthāpatya Veda* and its expression as *Vāstu Shāstra* (the

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science of architecture). The architectural details of Vāstu Shāstra are, in turn, documented in texts such as the *Manasāra* and *Mayamāta*, among other significant Vedic textual records. This approach to site, surroundings, design, and construction is commonly referred to as *Vāstu Vidyā* (the science of dwelling) and extends beyond home design to include temples and sacred sites, government and commercial buildings, town and city planning, and a variety of public places and spaces such as hospitals, schools, and universities (Dutta & Adane, 2018; Ganapati Sthapati, 2005; Gaur, 2002; Vijayan, 2018).

The accepted features of Vāstu Vidya include a selection of an appropriate site (the incorporating type of soil and other environmental attributes), the orientation of the home, the shape of the site and building (Kumar & Kumar, 2012), and the presence of “five natural elements—ether, earth, air, water, and fire—which [equate to the] human’s five senses (hearing, touch, sight, taste, and smell). The elements need to be present within a space to make it vibrant and filled with positive energy. According to Indian philosophy, if the house is properly laid out according to the five elements, the living occupants will be normal and enjoy good health” (Lah et al., 2015). Some of these features have been explored empirically. For example, Hekmatmanesh et al. (2019) studied sleep patterns and north-south/east-west orientation in Iran, and Travis et al. (2005) investigated burglaries, mental health, and sleep patterns in south and east-facing homes in the United States.

In summary, according to Fazeli & Goodarzi (2010, 100), Vāstu Vidya is “a traditional guide to architecture [which] aims to design buildings in harmony with the natural laws of the universe”, although there have been strident critiques of such traditional guides because they are “increasingly in conflict with the privatizing logic of the ‘neoliberal city’” (Birtchnell, 2016, 2348). Nevertheless, our interest in this paper is the evolution of Vāstu Vidya into what is now called *Maharishi Vāstu* or *Maharishi Vedic Architecture* (MVA) and its possible association with quality-of-life indicators, such as health and well-being.

To this end, we examine the propositions of Maharishi Mahesh Yogi, founder of Maharishi European Research University (MERU), Maharishi Vedic University (MVU) and Maharishi International University (MIU), who in the latter part of the twentieth century not only re-enlivened the core principles of Vāstu Vidya but located their origin in the domain of pure consciousness or *Ātman* using the language of the Vedic tradition, in the unified field of natural law as described by modern physics (Hagelin, 2015). The understanding that consciousness is fundamental to matter and outer physical expressions in life, such as the built environment, was also held by theoretical physicist Max Planck (1931), who said: “I regard consciousness as fundamental. I regard matter as derivative from consciousness. We cannot get behind consciousness. Everything we talk about, everything we regard as existing postulates consciousness.”

Indeed, for Maharishi (1998, 165), it is the “Vedic consciousness of the architect and builder” that among many factors is primary in distinguishing MVA from Vāstu Vidya. ‘Vedic consciousness’ in this context means an awareness, an intelligence, which is awakened to its full potential and completely aligned with all the laws of nature. Of importance is Maharishi’s introduction of a number of techniques aimed at developing such a state of human consciousness or enlightenment (MVU, 2009) and the advanced theories of Vedic consciousness as they relate to the different modern disciplines such as physics, mathematics, management, law, art, and sustainable living, which have been developed to investigate and describe the development of consciousness (Nader, 2013).

Specifically, Maharishi (1998, 198-199) maintained that “Vedic Architecture...has only one basic principle of structuring and that is Pūrṇāt pūrṇam udachyate (*Bṛihad-Āraṇyak Upanishad*, 5.1.1)—from fullness emerges fullness—from fullness is structured fullness—from total Natural Law [from pure consciousness] emerges total Natural Law”. As Bonshek et al. (2007, 252) have pointed out, the “Vedic structure [such as a home] embodies wholeness—the totality of consciousness—while having a specific value. In this way, it contains both specificity and unity. Additionally, for Vedic Architecture to embody complete knowledge [i.e., Veda], it must: 1) be supported by the theories of modern science; 2) take into account the consciousness of the architect and builder; and 3) conform to the principles, procedures, and formulas [of Vāstu Shāstra] according to which the eternal structure of the universe itself has been laid out”.

The unique features of MVA have been well established elsewhere (Institute of Vedic Architecture and City Planning [IVACP], 2019; Ministry of Architecture, 2017; MVU, 1998). Audet’s (2014, 2016) analysis of group theory is particularly informative given it investigates the Ayadi system of measurement and testing used in MVA, and his detailed explanations of the ‘square’, inverse elements, and eight levels or aspects of symmetry (along the lines of four cardinal directions—east, west, north and south, and four intercardinal or ordinal directions—northeast, southeast, northwest, and southwest) are important. In fact, concerning cardinal symmetry and directions, MVA cites neurophysiological research, which indicates the human brain “is highly sensitive to orientation, position, and direction in space” (Hartmann, 2015, 155-156), and thus functions differently depending on which way it is facing.

With these directions in mind, MVA considers orientation of buildings, placement of rooms, proportions and Vedic measurements, the shape and slope of the land on which a building is located, bodies of water and their influence vis-à-vis the site, and other environmental influences on the building (and its occupants) including, for example, an unobstructed rising sun, which it regards as fundamentally significant (MVU, 1998). Considerations in MVA of healthy buildings

extend to the density of housing, the Vāstu boundary (i.e., outer fence), design and purpose of the center of the building and site (i.e., the *Brahmasthan*, sustainable garden cities, and use of a cardinal and intercardinal grid in town planning (IVACP, 2019). Other features of MVA as they relate to quality of life include abundant use of natural light (particularly in relation to the movement of the sun and its relation to room placement), natural systems of ventilation and light management, and building sustainably with natural, non-toxic materials suitable to local climatic conditions, such as wood, brick, rammed earth and adobe, as well as natural finishes like clay stucco, marble, ceramic tile, natural fiber for carpets, curtains and furniture, and healthy, non-toxic paints and glues.

According to Maharishi, “because the individual is cosmic, everything about individual life should be in full harmony with cosmic life. [Maharishi Vedic Architecture] gives dimensions, formulas, and orientation to the buildings that will provide cosmic harmony and support to the individual for his peace, prosperity, and good health—daily life in accord with Natural Law” (cited in Hartmann, 2015, 153). Such an approach to harmonizing individual life with cosmic life means the “dining room should be located where digestion will be most healthy, the study should be located where the intellect will be most lively, and the living room should be located where social life will enjoy greatest support” (MVU, 1998, 6). These integrated design features of MVA, when applied to office buildings, have recently been associated with increased creativity in workers (Maheshwari & Werd, 2019, 2020), and Bonshek (2001, 2020), Hamill (2020) and Bonshek and Hamill (2017) have analyzed MVA from perspectives of resilience, garden cities, sustainability, and the arts, drawing from multiple examples in Cambodia and elsewhere around the world.

Maharishi has singled out three essential ingredients of MVA for it to be of value (what in this study we refer to as the ‘principles and practices of MVA’): proper orientation of the building to cardinal east (i.e., toward the rising sun, as identified in *Manasāra*, IV, 87, which says: ‘due east should be preferred for the buildings of those who desire enlightenment’);

proper placement of rooms within the building (i.e., entrance door facing cardinal east or north; kitchen in the southeast corner); and proper proportions of external and internal dimensions, specifically those dimensions calculated using Vedic Mathematics (Gorini, 2015). As one expert in MVA exclaimed: “Without mathematics, there is no Vāstu!” (cited in Audet, 2014, 202).

When these (and other) considerations are factored into the design of a building, “an auspicious Vāstu promotes positive, evolutionary influences; buildings without auspicious Vāstu produce negative effects” (MVU, 1998, 16). ‘Positive’ and ‘evolutionary’ in this context mean an influence from the building to its occupants which is supportive of life, which promotes a healthy, happy, and progressive human existence and improves the quality of life. While we recognize that ‘quality of life’ is a disputed construct, with a long and complicated history in the social sciences, education, economics, and psychology (e.g., Michalos, 2008; Morton et al., 2017), we nevertheless use it here to mean the general state of balance, health, and happiness of human life, and the actual conditions of that life and what an individual makes of those conditions.

In contrast, “wrongly placed entrances [i.e., toward the south and west] may contribute to inauspicious negative influences for everyone—anger, aggression, constant fear, poverty, lack of vitality and success, and chronic diseases” (MVU, 1998, 11). “Unless homes and working places are in harmony with the Natural Law that harmonizes everything in creation and maintains order in the whole ever-expanding universe”, Maharishi proposed, “the life of the individual will always remain off balance. Lack of balance between the individual and his Cosmic Counterparts [i.e., the environment and wider universe] will always be the basic cause of ill health, problems, and misfortune” (Maharishi, 1998, 172-173). In summary, MVA seeks to design and construct buildings which promote the quality of life of their occupants, and this endeavor comes about because of the developed state of consciousness of the architect and builder drawing from ancient principles of design embedded in the Veda, a domain of complete knowledge, the

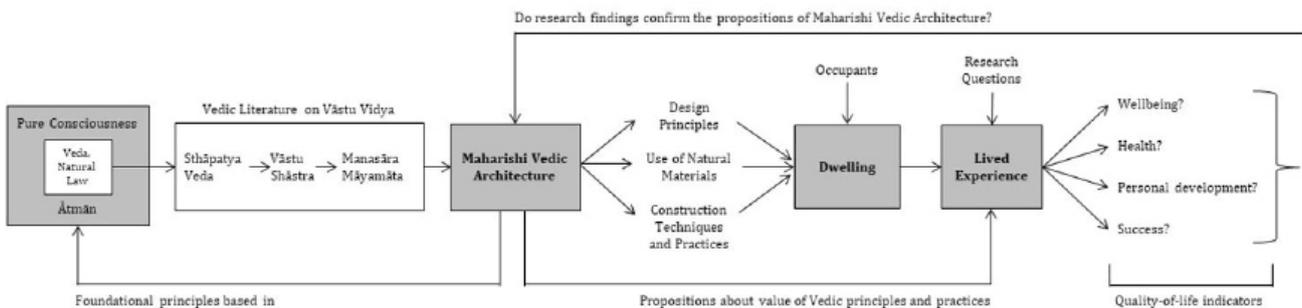


Fig. 1: A proto-theoretical model of MVA research and its relation to quality-of-life indicators.

field of Natural Law.

For articulation with this study, Figure 1, therefore, presents a proto-theoretical model of the relationship of MVA to pure consciousness, Veda and Vāstu Vidya on the one hand and, through the principles and practices of MVA, the promotion of quality of life on the other. Maharishi Vedic Architecture proposes its affirmative impact on a range of outcomes for occupants, and we have tentatively identified four measurable factors, which represent what we are terming ‘quality of life’ in this research: well-being; health; personal development; and success. These factors have elsewhere been singly or collectively associated with quality of life (Devlin et al., 2018; Krägeloh et al., 2015; Utian et al., 2018).

Maharishi Vedic Architecture has been applied in multiple countries for the past several decades, with personal testimonials and an abundance of anecdotal evidence of lived experience used to describe it. However, no systematic or comprehensive global evaluation of its relation to quality of life has been undertaken.

In order to explore the experience of living in a home designed according to the principles and practices of MVA, we posit the following three research questions: RQ1) what effects on quality of life are reported by those living in homes designed and constructed according to the principles and practices of MVA; RQ2) do reported lived experiences differ according to the length of time one lives in the MVA dwelling; and RQ3) do reported lived experiences differ according to the location of the MVA dwelling? Where possible, we will also explore the ‘meaning’ individuals ascribe to these reports.

MATERIALS AND METHOD

This study uses a post hoc concurrent mixed methods design aimed at triangulating quantitative (quan) and qualitative (qual) evidence in order to answer the research questions (Almalki, 2016). We use the term ‘triangulate’ to mean our seeking convergence of quan and qual findings via corroboration (C1) or correspondence (C2).

Participants

The Institute of Vedic Architecture and City Planning in the Netherlands holds the design and construction records of several hundred MVU homes and commercial buildings throughout the world. From the international database of the IVACP, owners and occupants of certified MVA homes were contacted by the second and fourth authors of this study. A quality-of-life questionnaire was developed by these researchers and made available online as a survey to owners and occupiers of MVA homes in every country. As a result, 158 individuals from 14 different countries were convenience sampled for this study. The countries represented by the respondents in this study were: Australia, Belgium, Brazil, Canada, Denmark, Finland, Germany, Ireland, Netherlands, New Zealand, South Africa, Spain, the United Kingdom, and the United State of America.

Procedure

In addition to questions concerning age, gender, length of time living in the home, children living at home, and whether the occupant lived in the home part-time or full-time, among other demographic and background information, 13 items designed to collectively determine the quality of life (QoL) were posited.

The survey was developed with the following 5-point Likert response set: 1) strongly disagree, 2) disagree, 3) neither agree nor disagree, 4) agree, or 5) strongly agree. The respondent was asked to rate his/her experiences ‘since living in a home designed according to the principles and practices of Maharishi Vedic Architecture’ in the following categories: Q1) overall practical benefits; Q2) overall quality of life; Q3) quality of sleep; Q4) mental health; Q5) level of stress; Q6) family relationships; Q7) physical health; Q8) financial status; Q9) meaningfulness and purposefulness in life; Q10) spiritual development; Q11) good luck; Q12) ability to fulfill goals; and Q13) feeling comfortable in one’s home. These 13 items were clustered to form four factors (F): Qs 2, 6 and 13 were clustered to form Factor 1: Well-being; Qs 3, 4, 5, and 7 were clustered to form Factor 2: Health; Qs 9, 10, and 11 were clustered to form Factor 3: Personal Development; and Qs 1, 8, and 12 were clustered to form Factor 4: Success.

Our usage of the term ‘well-being’ embraces the biopsychosocial to mean multiple personal attributes, such as conducive familial relations and comfort in the home; ‘health’ is defined as a reasonable quality of sleep, sound mental and physical health, and low levels of stress; ‘personal development’, including spiritual development, is defined as greater meaning and purpose in life and good luck (said to be an outcome of MVA, as opposed to the misfortune befalling those living in incorrectly oriented homes [Hartmann, 2015, 155]); and ‘success’, which includes general benefits, improved financial status, and goal attainment.

Participants were also asked to nominate ‘yes’ or ‘no’ to the question of whether they had experienced more ‘success’ since living in MVA, with four nominal options if selecting ‘yes’: wealth and financial gain; family and interpersonal relationships; career and professional development; and other. Respondents who had children living with them, acting in the capacity of third-person key informants, were asked to report the experiences of their children since living in the home, with nominal options being: practical benefits; happier; healthier; performed better in school; or other. Respondents were also asked to write about their personal, subjective experiences, observations, feelings, and opinions of living in the home designed according to MVA. Open-ended responses encouraged non-directed comments to explore “...the meaning individuals...ascribe to a social or human problem” (Creswell, 2014, 4). Only one response per respondent will be reported in the qual findings. Dependability (comparable to reliability in quan research) was controlled by asking the same question to each participant following the same research protocol;

trustworthiness (comparable to validity in quan research) was maintained by developing line-of-inquiry questions in a way which was consistent with (and an extension of) previously published research on QoL. Such an approach to mixed methods research has been discussed elsewhere by Fergusson et al. (2019).

Data Analysis

Descriptive statistics were used to evidence the demographic profiles and backgrounds of respondents, including the frequency of scores. Correlational analysis was conducted to identify interrelationships among factors and with the unified concept called QoL, but we made no *a priori* assumptions about relationships among factors. Initial descriptive statistics, as well as Cohen's effect sizes (*d*) and Fritz et al. (2012) method of interpreting effect sizes, were calculated to determine the answer to RQ1, and *multivariate* analyses of variance (MANOVAs) tested at the two-tailed level were calculated to determine the answers to RQ2 and RQ3.

Methods associated with systematized, precise and transparent qual research encouraged by Nowell et al. (2017) were applied in this study; specifically, their six-stage method of thematic analysis which involves: 1) familiarity with the data; 2) generating initial codes; 3) searching for themes; 4) reviewing themes; 5) defining and naming themes, and; 6) documenting the findings. Preliminary codes were grouped conceptually to reflect similar emergent themes. Subsequent analyses of themes by the authors using criteria for both frequency (i.e., recurring themed patterns, as discussed by Nowell et al., 2017) and saliency (i.e., important or novel themes, as discussed by Buetow, 2010) resulted in their organization within the four factors, with free-text responses serving as the primary source of data.

Convergent triangulation was determined by interpreting the quan and qual data using the exploratory or holistic framework of QoL as opposed to a post-positivist, confirmatory approach

typically used when interpreting quan data (Archibald, 2016).

RESULTS AND DISCUSSIONS

Quantitative Findings

Pearson product moment correlation coefficients were computed to test within factor inter-item reliability (average $r = .55, p < .001$). All correlations between items were statistically significant ($p \leq .01$). For example, Q1:Q2 $r = .81, p < .0001$; Q2:Q3 $r = .44, p < .0001$; Q3:Q4 $r = .58, p < .0001$; Q4:Q5 $r = .57, p < .0001$; Q5:Q6 $r = .58, p < .0001$; Q6:Q7 $r = .64, p < .0001$; Q7:Q8 $r = .35, p < .001$; Q8:Q9 $r = .60, p < .0001$; Q9:Q10 $r = .73, p < .0001$; Q10:Q11 $r = .73, p < .0001$; Q11:Q12 $r = .84, p < .0001$; and Q12:Q13 $r = .52, p < .0001$. Q13 was the least correlated of all items, ranging in strength from Q13:Q3 $r = .21, p = .01$ to Q13:Q5 $r = .59, p < .0001$. Cronbach alpha coefficients computed for scale reliability of both factors and the overall QoL construct (i.e., the combined score of all factors) yielded an 'excellent' rating of internal consistency $\alpha = .91$.

Demographic and Background Variables

Table 1 summarizes the demographic and background data for this cohort of respondents ($N = 158$). Forty three percent of respondents were from the United States (representing $n = 68$ MVA homes), with the rest from Australia ($n = 14$), Belgium ($n = 1$), Brazil ($n = 1$), Canada ($n = 1$), Denmark ($n = 2$), Finland ($n = 1$), Germany ($n = 3$), Ireland ($n = 2$), Netherlands ($n = 10$), New Zealand ($n = 15$), South Africa ($n = 1$), Spain ($n = 1$), and United Kingdom ($n = 38$). For the purposes of answering RQ3, respondents from these countries were grouped into three regions: North and South America; Europe; and Asia-Pacific.

Ninety-seven percent of respondents were above 40 years of age; approximately half the respondents were male ($n = 83, 53\%$) and half were female ($n = 75, 47\%$); 82% of respondents had been living in their home for >3 years, with 90% living there full-time. Sixty-eight percent of respondents built their

Table 1: Demographic and background variables.

Age of Respondent	18-24 years old/3%	41-65 years old/43%	>65 years old/54%	
Gender of Respondent	Female: 47%		Male: 53%	
No. of Children	0 children/40%	1-2 children/37%	>3 children/23%	
Number of Years Living in MVA	<1 year/5%	1-2 years/12%	3-4 years/9%	>5years /74%
Part- or Full-time Living in MVA	PT: 8%		FT: 92%	
Owner status	Rented: 13%	Purchased: 19%	Built: 68%	
Number of People Living with Respondent	0 people/18%	1 person/49%	2> people/33%	
Size of Home	<100 m ² /18%	100-200 m ² /28%	200-300 m ² /26%	>300 m ² /28%

own home, 19% purchased an existing home, and 13% rented their home. The size of MVA homes occupied by respondents was divided roughly equally among the following four categories: <100m² (18%); 100-200m² (28%); 200-300m² (26%); and >300m² (28%).

Lived Experiences

In order to answer RQ1, Table 2 shows responses to the 13 items related to living in a home designed according to the principles and practices of MVA. Both the number and percentage of respondents are shown for each item; the weighted average shown at far-right is the average of all responses.

Eighty-nine percent of the respondents (140 people) answered favorably (agree/strongly agree) to having experienced some practical benefits from living in MVA (Q1). Eighty-eight percent agree/strongly agree that since living in MVA they have experienced an overall improved quality of life (Q2). The highest observed responses were in terms of spiritual growth (Q10), good fortune (Q11), ability to fulfill personal goals (Q12), feeling less stress (Q5), feeling a greater sense of meaningfulness and purposefulness in life (Q9), improved mental health (Q4), and more harmonious family relationships (Q6), with more than 75% of the respondents answering either agree/strongly agree to each of these items. Fifty-eight percent

reported that quality of sleep improved since living in MVA (Q3), 68% experienced improved physical health (Q7), 71% experienced improved financial status (Q8), and 94% said they were comfortable living in their MVA home (Q13).

Eighty-six percent of respondents (136 people) reported they had been more successful since living in a home designed according to the principles and practices of MVA, with greater success taking the form of wealth and financial gain (54% of respondents), family and interpersonal relationships (61% of respondents), and career and professional development (54% of respondents). Twenty-four percent of respondents cited other forms of success, including an ability to make “better decisions,” “increased creativity,” and “better communication with, and empathy for, others.”

Sixty percent of respondents (95 people) reported living with children; 44 of these respondents commented on their experiences. Of these, 71% reported practical benefits for their children; 78% and 61% respectively reported their children were happier and healthier, and; 39% reported their children performed better in school since living in MVA. Other observed benefits included: children were “less distracted by outside influences and motivated to keep a healthy routine of going to bed on time, exercising, enjoying family life and developing lasting friendships;” “in our non-Vāstu house our toddler son

Table 2: Number of responses to, and percentage of total responses for, 13 items by Factor.

Since living in the home designed according to the principles and practices of Maharishi Vedic Architecture...	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Weighted Average*
Factor 1: Well-being						
Q2. Quality of Life	3/1.9%	0/0%	15/9.5%	44/27.8%	96/60.7%	1.7
Q6. Family Relationships	3/1.9%	4/2.5%	31/19.6%	61/38.6%	59/37.3%	1.1
Q13. Comfort	2/1.3%	2/1.3%	5/3.2%	27/17.0%	120/76%	1.7
Factor 2: Health						
Q3. Sleep	1/0.63%	7/4.4%	58/36.7%	50/31.6%	42/26.6%	0.8
Q4. Mental Health	2/1.3%	2/1.3%	31/19.6%	64/40.5%	59/37.3%	1.1
Q5. Stress	2/1.3%	1/0.63%	23/14.7%	64/41.0%	66/42.3%	1.2
Q7. Physical Health	4/2.5%	5/3.2%	40/25.9%	57/37.0%	48/31.1%	0.9
Factor 3: Personal Development						
Q9. Meaning and Purpose	2/1.3%	1/1.3%	28/17.8%	52/33.1%	73/46.5%	1.2
Q10. Spiritual Growth	2/1.3%	1/0.63%	18/11.4%	51/32.3%	86/54.4%	1.4
Q11. Good Fortune	2/1.3%	1/0.63%	26/16.5%	51/32.3%	78/49.4%	1.3
Factor 4: Success						
Q1. Practical Benefits	3/1.9%	0/0%	14/8.9%	57/36.3%	83/52.9%	1.4
Q8. Financial Status	4/2.5%	3/1.9%	38/24.2%	61/38.8%	51/32.5%	1.0
Q12. Ability to Fulfill Goals	2/1.3%	1/0.63%	25/15.8%	58/36.7%	72/45.6%	1.2

* Note: Average of strongly disagree (-2 score), disagree (-1 score), neither agree nor disagree (0 score), agree (+1 score), and strongly Agree (+2 score).

was constantly getting respiratory illnesses, but in our Vāstu home these all cleared up;” and “our son turned his life around, finished college Magna Cum Laude, and now has a job as a computer scientist.”

Analysis of Four Factors

Analysis of the four factors indicated that each was statistically correlated to the other at the one-tailed level (F1:F2 = .77; F1:F3 = .73; F1:F4 = .81; F2:F3 = .66; F2:F4 = .79 and F3:F4 = .79, all significant at $p < .0001$) and to the QoL construct (F1:QoL = .86; F2:QoL = .79; F3:QoL = .83; and F4:QoL = .87, all significant at $p < .0001$). Effect sizes of the difference between respondents who strongly disagree/disagree with the items in each factor versus those who agree/strongly agree were calculated to measure the effect of MVA. Effect sizes were: F1, $d = 1.48$; F2, $d = 1.06$; F3, $d = 1.27$; and F4, $d = 1.21$, all roughly equivalent to $r = .40-.50$ (Fritz et al. 2012). Effect sizes of this magnitude indicate the difference between low-rated responses and high-rated ones on the QoL construct can be generally classified as ‘high’.

Length of Time Living in MVA Home

In order to answer RQ2, two-tailed MANOVAs were calculated on all four factors and for the overall QoL construct using the length of time living in MVA as the dependent variable. Length of time was determined by < 3 years living in MVA ($n = 25$) and > 3 years living in MVA ($n = 133$). Results indicated that those living in MVA homes for a longer time tended to exhibit higher scores on well-being ($F = 2.02$, $p = .02$), success ($F = 2.57$, $p = .005$), and personal development ($F = 1.40$, $p = .08$) compared to those who lived in MVA homes for a shorter period of time. The factor of health did not reach statistical significance ($F = .84$, $p = .19$). Taking into account all the factors together to produce an overall QoL measure, a statistically significant difference between the two groups was observed ($F = 1.89$, $p = .02$).

Location

In order to answer RQ3, two-tailed MANOVAs were calculated on all four factors and for the QoL construct using the location of the MVA home as the dependent variable. Location was determined by assigning the home country to one of three regions. Results indicate there was no statistically significant difference between the lived experiences of respondents in the three locations on any factor or on the overall QoL score (F-values ranged from $F = .13$ to $F = .43$ for factors, and $F = .01$ for Quality of Life, $p = ns$), indicating that the location of the MVA home played no role in the observed quan findings of this study.

Qualitative Findings

Fifty-four percent of respondents (86 people) volunteered qualia for this study, although the free-text structure disallowed

thick descriptions. Qualia are summarized by factor and theme in Table 3. In order to begin triangulating results, after coding, we grouped written responses with one of the factors and thereby with QoL to triangulate results for RQ1. How the qualia triangulate with quan data have been denoted by the designation of C1 (i.e., quale corroborates or supports one or more quan finding) or C2 (i.e., quale corresponds or is similar to one or more quan finding).

While responses were mostly cross-sectional, where applicable we have italicized reported experience related to changes over time in order to triangulate RQ2; such descriptors include words like ‘improve’, ‘cumulative’, ‘development’, and ‘speed up’. The common element of these experiences addresses feelings of contentment, peacefulness, happiness, safety, and security. Consistent with the quan findings, nothing in the qualia relate to the specific or unique features of ‘location’ of the home, thereby corroborating findings associated with RQ3.

Well-being

Having a sense of ‘well-being’ can embrace multiple perspectives, and responses in this data indicate living in a home designed according to the principles and practices of MVA can take many individualized forms. Among the most pervasive responses were those related to themes of silence, safety, protection, security, and a sense of peacefulness in the home. Of interest is the finding that well-being (which also relates to emotional health, positive affect, and resilience) is inversely associated with, and protects against, psychopathologies (Trompetter et al., 2017), and good health and longevity, better social relationships, work performance, and creativity are predictors of well-being (Diener et al., 2018). The following quotations, which are representative of $\approx 20\%$ of qual respondents, capture several of these themes:

“You feel the difference in my Vāstu home from the moment you walk in and living in one brings a deep sense of settledness that grows with time.” —Female, Fairfield, Iowa (C2)

“A place of great peace and calmness, that feels right.” —Male, Perth, Australia (C2)

“It feels like a safe haven, a sanctuary.” —Male, Nelson, New Zealand (C2)

“Deep silence permeates our home. I feel complete freedom in it—no walls impinging on me.” —Female, Fairfield, Iowa (C2)

“I always feel protected and safe in Maharishi Vāstu.” —Female, Maharishi Vedic City, Iowa (C2)

“I feel protected and contented.” —Female, Vero Beach, Florida (C2)

“I feel protected, happy and content to be at home.” —Female, Weston, Connecticut (C2)

“We feel protected and nourished. Visitors to the house, particularly ladies, do not want to leave. They feel safe here.” —Female, Vero Beach, Florida (C2)

In addition to peacefulness, a sense of well-being, including its association with happiness, is also echoed in many responses,

Table 3: Summary of qual findings by factor, theme and example.

Factor	Theme	Example
Factor 1: Well-being		
	Settledness, peacefulness, calmness	“Living and working in Vāstu, greatly increases [my] joy and peacefulness”
	Silence	“Deep silence permeates our home”
	Safety, security, protectedness, sanctuary	“It feels like a safe haven, a sanctuary”
	Sense of freedom	“I feel complete freedom in it—no walls impinging on me”
	Supportive, nourishing, contented	“...an overall sense of well-being, order and harmony endlessly permeating from an infinite source of all that is good, supportive and nourishing to life, which is contained in the very structure of the home”
	Use of natural materials	“Living in Vāstu is deeply nourishing, comfortable, not only because natural materials are used in construction, but because one feels at home on the deepest level of one’s Being”
Factor 2: Health		
	Relaxation	“I am more relaxed on a deep level, more at ease”
	Absence of loneliness, fear, unhappiness	“I have never experienced loneliness, fear or unhappiness while in my house”
	Energy	“Increase of energy is one of our most noticeable benefits”
	Physical, emotional and spiritual health	“...tremendous feeling of upliftment on every level: physically and health-wise, emotionally and spiritually”
Factor 3: Personal Development		
	Decision making	Much better decisions made in this environment by us and others”
	Enlightenment	“Living in a Maharishi Vāstu home speeds up your whole process of evolution and enlightenment”
	Feelings, emotions	“Greater development of qualities of the heart.”
	Orderly thinking	“I can feel how the orderliness of Vāstu creates greater orderliness in my thinking. My thinking is more balanced and clearer”
	Tolerance	“More acceptance of things I don’t like”
	Good luck	“Good luck financially, with increasing harmony among family who live elsewhere”
Factor 4: Success		
	Goal attainment	“...what I think and want to achieve can be fulfilled”
	Financial status	“...allowing for better finances and success in work”

such as:

“There is an overall sense of well-being, order and harmony endlessly permeating from an infinite source of all that is good, supportive and nourishing to life, which is contained in the very structure of the home.” —Male, Vero Beach, Florida (C1)
 “Living and working in Vāstu, greatly increases [my] joy and peacefulness. It’s a feeling of being blessed and nurtured.

Many times I would feel not limited or bound by the walls of the house as it reflected an expanded sense of self, and I was less aware of boundaries and differences within or outside of the house or in my mind and my environment.” —Male, Bethesda, Maryland (C2)

“The benefits of living in Vāstu are positive and cumulative. The more I live in our Vāstu home, the less I want to leave! The house feels like a protective bubble from the stress of the

outside world. It is a haven of peace and harmony that visitors can feel immediately. Even those who are not inclined to notice such things remark on the wonderful, peaceful feeling they have when entering our home—as if a burden has been lifted and they can relax.” —Female, Lincoln, Massachusetts (C2)

Some respondents commented on the use of natural light, cross-ventilation and natural materials and how they contributed to a sense of well-being:

“I love our Vedic home. I am proud of my home, built of all-natural materials and oriented according to the cardinal points. This orientation makes me feel grounded. It has avenues of light running north and south, east and west, which fill my home with light and air. My home feels alive, complete, sheltering. It is built according to a sacred geometry that brings me a feeling of harmony with my environment. There has never been a person who entered my home who was not affected by its beauty and tranquility.” —Female, South Orleans, Massachusetts (C2)

“Living in Vāstu is deeply nourishing, comfortable, not only because natural materials are used in construction, but because one feels at home on the deepest level of one’s Being.... Oriented towards the sun, and in tune with Nature, there... (are) less obstacles felt in the dwelling and in life. Decisions are clearer and right, life flows in a simple, harmonious way.” —Male, Blakeney, United Kingdom (C2)

In summary, respondents recalled their satisfaction with the harmony created by MVA and the greater general support to life it provides:

“It is pleasing on all levels to live in a house that creates harmony and support for all areas of one’s life—in accord with the deepest subjective and objective experiences and understanding.” —Female, Fairfield, Iowa (C1)

Health

As biopsychosocial beings, the health of humans encompasses a range of personal and environmental domains. For example, in normal adults, poor sleep is associated with biomarkers of amyloid pathologies (Sprecher et al., 2017), but none of the qualia in this study related to improved sleep patterns or reduced stress. However, health-related quality-of-life (HRQoL) indicators uncovered by the study include feelings of ease and relaxation, increased energy, an absence of loneliness and fear, and improved mental and physical health:

“I am more relaxed on a deep level, more at ease.” —Female, Fairfield, Iowa (C1)

“[Even though living alone] I have never experienced loneliness, fear or unhappiness while in my house.” —Female, Fairfield, Iowa (C1)

And several references were made to increased energy associated with living in the house:

“On many levels, it feels very expanded living in Maharishi Vāstu. We both have the experience that the outside of the house is very much integrated into the inside of the house; in other words, the walls don’t feel so solid, but at the same time they feel protective. The light and sunshine that comes into the house via the shine-through light and placement of windows feel energizing. The *increase* of energy is one of our most noticeable benefits. In non-Vāstu, it can often feel like wading through treacle to get things done; but in Maharishi Vāstu there is a tangible experience of moving forward in achieving our goals. We have also experienced that these positive effects are *cumulative*—it gets *better and better!*” —Female, Rendlesham, United Kingdom (C1)

Recurring references to mental and physical health were also routinely made by respondents from multiple locations:

“There is a tremendous feeling of upliftment on every level: physically and health-wise, emotionally and spiritually.” —Male, Fairfield, Iowa (C1)

“I have felt enormous benefit from moving into a Vāstu home. I am healthier, have an *improved* financial situation, and above all I am experiencing a greater level of happiness and contentment.” —Male, Rendlesham, United Kingdom (C1)

“Here is something that you might not hear from others: I live in a place of serious agricultural pollution, which I think is horrible for health. But when I am in my Vāstu home, I feel safe from that. It is basically the only place I feel truly safe.” —Female, Fairfield, Iowa (C1)

And social interactions were affected:

“Wider family conflicts have been resolved.” —Female, Helena Bay, New Zealand (C1)

Personal Development

We used this measure to denote a range of personal experiences related to feelings or experiences of progress, advancement, or development. A number of respondents claimed that the MVA home improved clarity of thinking and their ability to make decisions, in one case linking such experience of more orderly thinking to the proportions of rooms. The relationship between orderly and decisive thinking is associated with better health, and thus the ability to think clearly and rationally about what to do or what to believe is essential when managing one’s own health and well-being:

“Immediate sense of calm and peace on entering our home. Much better decisions made in this environment by us and

others.” —Male, Perth, Australia (C2)

“My most recent experience is noticeable aesthetic repose from the proportions of the rooms. I can feel how the orderliness of Vāstu *creates greater* orderliness in my thinking. My thinking is *more balanced and clearer*, as water is clear and transparent. Even though my moods may change with the ups and downs of life, there is an underlying awareness that stands apart.” —Female, Vero Beach, Florida (C1)

Perhaps without an awareness of the source, reference was made to the growth of ‘enlightenment’, as cited earlier from the Manasāra, which states: ‘due east should be preferred for the buildings of those who desire enlightenment’:

“Living in a Maharishi Vāstu home *speeds up* your whole process of evolution and enlightenment. It is a very enriching experience on all levels.” —Male, Rendlesham, United Kingdom (C1)

And hence one respondent said:

“The ancient knowledge of Vāstu is just as relevant today so that we can live in harmony with our environment and become more in tune with nature.” —Male, Wellington, New Zealand (C2)

Reports of increased emotional stability and happiness were routinely mentioned as a fundamental benefit of living in a home designed according to MVA, and in one instance this condition was passed from the original owner to someone who later purchased the home. We also note that “everyday positive emotions, as fleeting as they may be, can initiate a cascade of psychological processes that carry an enduring impact on people’s subsequent emotional well-being. That is, beyond making people feel good in the present moment, positive emotions also appear to increase the odds—through dynamic broaden-and-build processes—that people will feel good in the future”, in what can be called enduring ‘upward spirals’ (Fredrickson & Joiner, 2018):

“Greater development of qualities of the heart.” —Male, Rendlesham, United Kingdom (C1)

“My architect guest said to her husband after a week of staying in our home: ‘there must be something to this house; have you noticed we didn’t quarrel here once!’” —Male, Hattula, Finland (C1)

“Our current house is the second house we have built according to the design principles of Maharishi Vedic Architecture. We sold the first house, and when the new owner arrived on the day of sale, he was brusque, and then brought cigarettes and alcohol into the house. A year later we visited our old neighbors, and he saw us, rushed up, and enthusiastically began praising the house. He told us he had more friends, more success, more happiness; he was a completely different person.” —Female,

Helena Bay, New Zealand (C1)

One respondent reported that, as a result of living in a home designed according to MVA, he experienced greater tolerance:

“More acceptance of things I don’t like.” —Male, Hastings, Australia (C2)

And a number of instances of good luck were reported:

“The most striking is the ‘support of nature’ or good luck [we have experienced]. I have many examples of thinking something in relation to a person and the person will almost immediately show up, or I bump into them almost immediately to fulfill whatever the desire may have been. I had a day last week where this happened three times in one day. This Vāstu was very expensive to build, but the stock market has been doing so well since construction that we are rapidly making up the extra cost that Vāstu demands.” —Female, South Orleans, Massachusetts (C1)

“Good luck financially, with *increasing* harmony among family who lives elsewhere.” —Female, Boone, North Carolina (C1)

“I benefited from an unexpected legacy.” —Female, Dewsbury, United Kingdom (C1)

“The home is very silent and peaceful. Things just happen in this home without any effort. It appears that you are not in control of the events that happen. It’s like living in a spaceship on autopilot...” —Male, Sydney, Australia (C1)

A respondent from Belgium made the important point that:

“Maharishi Vāstu is not magic. It is a tool to *progress* smoothly in all areas of life: material, health, and spiritual.” —Male, Vosselaar, Belgium (C1)

Success

We have defined success in a narrow sense, relating to general benefits, goal attainment, and financial well-being, however other dimensions of the construct were also reported. Goal attainment is a critical element of QoL because it is associated with positive affect and a high-level of engagement in life and work (Sirgy & Lee, 2018):

“More and more of everything: material and spiritual.” —Male, Bega, Australia (C1)

“Whenever I come back home from a journey—which is often as I travel quite a bit for business—I cannot believe the feeling when I enter my home; there is a tremendous feeling of upliftment on every level: physically, emotionally and spiritually. Of course, everyone has this feeling to some degree when they return home after being away, but with my Vāstu home, it is magnified 1000 times. I feel in this home that only good can come, that I am safe and protected and that what I think and want to achieve can be fulfilled.” —Male, Fairfield, Iowa (C1)

“There seem to be no boundaries to our great potential.” — Male, Bega, Australia (C1)

An improved financial status is important because financial strain is inversely related to HRQoL (Kale & Carroll, 2016):

“Again, there have been some clear external features affecting wealth and career. We moved in [to our Vāstu Vastu home] at the very bottom of the real estate and stock markets. They have *improved* dramatically allowing for better finances and success in work.” —Female, Vero Beach, Florida (C1)

“In 2016, my wife and I quit our jobs and moved to Fairfield, Iowa. I wasn’t sure how I would support us there, but we definitely felt drawn to live in Vāstu again. As soon as we moved into a rented Vāstu home, I began getting calls and emails from people who wanted me to do writing and editing for them. After just seven months, we were able to purchase our own Vāstu home, and are now living there very comfortably.” —Male, Fairfield, Iowa (C1)

“Have experienced ups and downs in business and relationships, but the *trend* is positive overall. Nevertheless, Vāstu doesn’t replace self-effort and self-awareness.” —Male, Wellington, New Zealand (C2)

From these data, it can be seen that the overall lived experience in MVA is subtle (but tangible) and all-pervasive:

“Overall, the quality of life has been enhanced in so many ways that are not measurable: they just are”. —Female, Boone, North Carolina (C1)

“The main benefit is the subtle, but tangible, feeling [I have] of support and ‘presence’ since living in Vāstu...In a presentation, a Vāstu architect used the word ‘established’ and I immediately understood what he meant. I feel more immovable since living here. There is deeper self-referral, steadiness and stability...I very much notice when visiting other non-Vāstu houses that that subtle presence and support is missing. People who do not experience or live in Vāstu cannot appreciate its value. [For example] in one Vāstu I stayed in some years ago, there was an extreme thunderstorm and lightning, but the house was totally unperturbed, steady as a rock, immovable, even with the turmoil going on around it. I felt deeply protected and safe. That was the first time I felt the value of Vāstu. —Female, Rendlesham, United Kingdom (C1)

Notwithstanding the above, one out of 86 individuals provided dissenting qualia, and two responses were neutral or mixed. They were:

“[Living in Vāstu] has not brought significant benefits but, in my case, significant disbenefits in terms of a serious illness.” —Male, Rendlesham, United Kingdom

“I have only lived in a Maharishi Vāstu house for four months, so I cannot yet fully judge the results.” —Male, Rendlesham,

United Kingdom

“Although my life has been much improved since moving into Vāstu, I feel I have had to face some of my main weaknesses. However, as a result, I believe there has been personal growth, for which I am grateful.” —Male, Rendlesham, United Kingdom.

CONCLUSIONS

Triangulated evidence of lived experiences converging on the QoL construct can be observed across all quan and qual factors. The nature of this convergence has been encapsulated in Figure 2. Results from the study indicate the principles and practices of MVA contributed to the quality of life of home occupants. For example, the majority of respondents across the 13 items and four factors agree/strongly agree with statements such as “My quality of life has improved” (Q2, F1, 88%), “My mental health has improved” (Q4, F2, 78%), “My life is less stressful” (Q5, F2, 83%), and “I feel my life has greater meaning and purpose” (Q9, F3, 80%). When clustered as factors, effect sizes also indicate there is a difference between those who agree/strongly agree with these statements when compared to those who do not. However, these results are tempered by the fact that only a small number of respondents (average $\approx 1.5\%$) rated their lived experiences as strongly disagree/disagree. Notwithstanding the low number of respondents in this group, these tentative results indicate with high probability ($p = .78$) that an objective observer could guess which group a person was in based on their response (Fritz et al., 2012). The qual findings corroborate or correspond to quan conclusions associated with the difference and magnitude of the effect, thereby answering RQ1.

Similarly, the lived experiences of respondents would indicate those who live in MVA homes for a longer duration (i.e., > 3 years) rate their experiences higher than those of shorter duration, as shown by analyses of variance. Such a conclusion is supported by the qual findings which use words associated with improved QoL, such as “development” and “cumulative”, thus answering RQ2 in the affirmative. However, the difference between strongly disagree/disagree and agree/strongly agree responses, the size of this effect, and the apparent higher ratings of QoL of longer-term participants is not affected by the location of the MVA home, thereby answering RQ3 in the negative. Thus, no evidence from this study suggests the principles and practices of MVA have been applied differently in any of the 14 countries.

However, caution about these preliminary conclusions is warranted, as limitations in both methods and data can be identified. Differential coverage, or what Bethlehem (2010) calls ‘under-coverage’ in the context of web surveys, such as the limited number of younger respondents in the sample, maybe representative of actual MVA home occupants but is not reflective of an evenly distributed age range and may have skewed perceptions of lived experiences, particularly as they relate to topics like self-identified physical health in

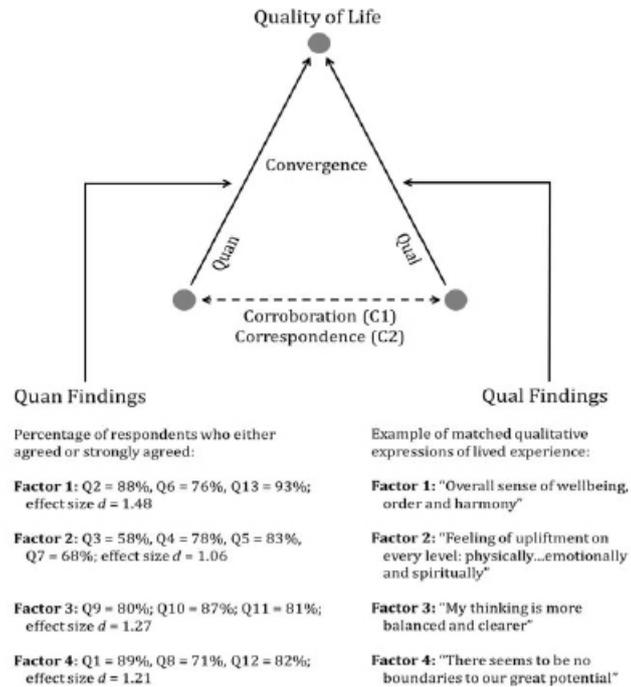


Fig. 2: Convergence of quan and qual findings to the QoL construct using a triangulated method.

an older population, although no evidence for such skewness was observed. Similarly, while the low number and percentage of strongly disagree/disagree responses suggest the clear majority of MVA occupants agree/strongly agree with the QoL statements, the limited number of adverse responses means data could be skewed, thereby potentially biasing results. Such skewness also appears in the qual findings where only three out of 86 respondents provided negative or neutral responses. Further, the limited number of shorter-term occupants (i.e., < 3 years), upon which the data for Q2 is derived (i.e., 17% of the total sample), may have caused the error.

Bias, due to self-selection, selective attrition, and participant reactivity, is also worth considering, particularly as it relates to online surveys. Self-selection refers to the possibility respondents reported lived experiences differently to the way a general or working population of MVA occupants would have responded had they been surveyed. While possible in some contexts, participants in this study represented the majority of registered homeowners in the IVACP database, thus limiting the potential impact of self-selection. Selective attrition, the phenomenon through which a sample is the product of attrition rather than balanced representation, is unlikely given the cross-sectional nature of the study.

Moreover, participant reactivity (St. Jean, 2013), which can cast doubt on both the reliability and validity of research findings, may have in this case caused participants to change their quan and qual responses to meet the expectations of the researchers; they may have wanted to show to the researchers that 'MVA is special' and 'worthy of the extra effort and investment we made in it'. If so, respondents did

so both quantitatively and qualitatively with remarkable consistency. One way we attempted to counter any possible error caused by reactivity is by having a sufficiently large sample size (although if reactivity occurred pervasively this may have increased the error), and questions were phrased in such a way to discourage participants thinking they have a social or collective responsibility to answer in a certain way. Acquiescence may also have occurred, but no such patterns were observed in the data. Future research should try to obtain baseline QoL data on MVA (i.e., prior to clients moving into the home), with systematic and repeated follow-up over time. The development of a more standardized test instrument with more robust measures of reliability and validity used longitudinally before and after the lived experience, would also provide more robust and reliable results.

Nevertheless, the results from this study are informative and important, given this is one of the first empirical studies to investigate the principles and practices of MVA. The international nature and scale of the research also make it especially worthwhile. More detailed and robust findings associated with length of time living in a dwelling designed and constructed according to the principles of MVA would be of interest, as would factor analysis of hidden or uncorrelated components. However, this preliminary research does provide data, which suggest the principles and practices of MVA are indeed associated with quality of life and point to the possibility that such lived experiences may improve over time. Such a conclusion is consistent with the fundamental propositions of these architectural design and constructs principles developed over centuries to enhance human life.

REFERENCES

- Addas, A. N. (2018). Landscape architecture and the Saudi Arabia quality of life program. *Emirates Journal for Engineering Research*, 24(3), 2.
- Almalki, S. (2016). Integrating quantitative and qualitative data in mixed methods research: Challenges and benefits. *Journal of Education and Learning*, 5(3), 288-296.
- Archibald, M. M. (2016). Investigator triangulation: A collaborative strategy with potential for mixed methods research. *Journal of Mixed Methods Research*, 10(3), 228-250.
- Audet, R. (2014). *Mathematics of Vedic architecture: Vastu Vidya of Maharishi Sthapatya Veda*. In Institute of Vedic Architecture and City Planning, How to build Vastu homes and cities, 2nd edition (pp. 202-211). Vlodrop, The Netherlands: Maharishi Vedic University Press.
- Audet, R. (2016). *Principles of Vastu planning in the light of group theory: Symmetry at the basis of the measurement system*. Vlodrop, The Netherlands: Maharishi Vedic University Press.
- Bardhan, R., Debnath, R., Malik, J., & Sarkar, A. (2018). Low-income housing layouts under socio-architectural complexities: A parametric study for sustainable slum rehabilitation. *Sustainable Cities and Society*, 41, 126-138
- Bethlehem, J. (2010). Selection bias in web surveys. *International Statistical Review*, 78(2), 161-188.
- Birtchnell, T. (2016). Vastu compliance: The gentrification of India's sacred spaces and the mobilities of ideas. *Journal of Ethnic and Migration Studies*, 42(14), 2345-2359. doi: 10.1080/1369183X.2016.1205806
- Bonshek, A. (2001). *Mirror of consciousness: Art, creativity and Veda*. Delhi, India: Motilal Banarsidass.
- Bonshek, A. (2020). Maharishi Vedic Architecture: Vāstu architecture for well-being and security. *Journal of Maharishi Vedic Research Institute*, 13, 19-72.
- Bonshek, A., & Hamill, N. (2017). *Sustaining consciousness and culturing life through the arts and architecture*. In L. Fergusson & A. Bonshek (Eds.). Maharishi Vedic University in Cambodia: Educational reconstruction and social renewal, 2nd edition (pp. 333-411), Gold Coast, Australia: Maharishi Vedic Research Institute Press.
- Bonshek, A. with Bonshek, C., & Fergusson, L. (2007). *The big fish: Consciousness as structure, body and space*. New York and Amsterdam: Redopi/Brill.
- Buetow, S. (2010). Thematic analysis and its reconceptualization as 'saliency analysis'. *Journal of Health Services Research & Policy*, 15(2), 123-125.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed methods approaches* (4th edition). London: Sage Publications.
- Devlin, N. J., Shah, K. K., Feng, Y., Mulhern, B., & van Hout, B. (2018). Valuing health-related quality of life: An EQ-5 D-5 L value set for England. *Health Economics*, 27(1), 7-22.
- Diener, E., Oishi, S., & Tay, L. (2018). Advances in subjective well-being research. *Nature Human Behaviour*, 2(4), 253.
- Dutta, T., & Adane, V.S. (2018). Human response and the complex city scene. In A. Catalani, Z. Nour, A. Versaci, D. Hawkes, H. Bougdah, A. Sotoco, M. Ghoneem & F. Trapani (Eds.), *Cities' identity through architecture and arts*. London, UK: Taylor & Francis Group; and *Proceedings of the International Conference on Cities' Identity through Architecture and Arts* (CITAA 2017), May 11-13, 2017, Cairo, Egypt.
- Fazeli, H., & Goodarzi, A. (2010). The principles of Vastu as a traditional architectural belief system from an environmental perspective. *WIT Transactions on Ecology and the Environment*, 128, 97-108.
- Fergusson, L., Harnes, M., Hayes, F., & Rahmann, C. (2019). Lines-of-inquiry and sources of evidence in work-based research. *Work-Based Learning e-Journal International*, 8(2), 85-104.
- Fredrickson, B. L., & Joiner, T. (2018). Reflections on positive emotions and upward spirals. *Perspectives on Psychological Science*, 13(2), 194-199.
- Fritz, C. O., Morris, P. E., & Richler, J. J. (2012). Effect size estimates: Current use, calculations, and interpretation. *Journal of Experimental Psychology: General*, 141(1), 2-18.
- Ganapati Sthapati, V. (2005). *Building architecture of Sthāpatya Veda*. Chennai, India: Dakshinaa Publishing.
- Gaur, N. A. (2002). *Sthāpatya Veda—Vāstu Śāstra: Ideal homes, colonies and town planning*. New Delhi, India: New Age Books.
- Gorini, C. (2015). Vedic mathematics and consciousness. In Foundation of Vedic India and Maharishi Veda Vyas Pratishthan (Eds.), *International conference to re-establish ideal Vedic India* (pp. 146-147). Fairfield, IA: Maharishi University of Management Press.
- Hagelin, J. (2015). Veda and physics: The science and technology of the unified field. In Foundation of Vedic India and Maharishi Veda Vyas Pratishthan (Eds.), *International conference to re-establish ideal Vedic India* (pp. 34-47). Fairfield, IA: Maharishi University of Management Press.
- Hamill, N. (2020). Strengthening urban resilience: The case for Maharishi Vedic Architecture. *Journal of Maharishi Vedic Research Institute*, 13, 73-111.
- Hartmann, E. (2015). Master plan to create ideal Vedic India through application of Vedic architecture. In Foundation of Vedic India and Maharishi Veda Vyas Pratishthan (Eds.), *International conference to re-establish ideal Vedic India* (pp. 152-157). Fairfield, IA: Maharishi University of Management Press.
- Hekmatmanesh, A., Banaei, M., Haghghi, K. S., & Najafi, A. (2019). Bedroom design orientation and sleep electroencephalography signals. *Acta Medica International*, 6(1), 33.
- Hui, X. (2017). *Housing, urban renewal and socio-spatial integration: A study on rehabilitating the former socialistic public housing areas in Beijing*. Delft, The Netherlands: Architecture and the Built Environment, Delft University of Technology.
- Institute of Vedic Architecture and City Planning. (IVACP) (2019). *How to build Vastu homes and cities (2nd edition)*. Vlodrop, The Netherlands: Maharishi Vedic University Press.
- Kale, H. P., & Carroll, N. V. (2016). Self-reported financial burden of cancer care and its effect on physical and mental health-related quality of life among US cancer survivors. *Cancer*, 122(8), 283-289.
- Kavitha, V., Shanmugapriya, P., Aishwaryapriya, A. S., & Harini, M. (2018). Service-based collaborative framework for smart gardening. *International Journal of Engineering & Technology*, 7(2.33), 588-590.
- Krägeloh, C. U., Billington, D. R., Henning, M. A., & Chai, P. P. M. (2015). Spiritual quality of life and spiritual coping: evidence for a two-factor structure of the WHOQOL spirituality, religiousness, and

- personal beliefs module. *Health and quality of life outcomes*, 13(1), 26.
- Kumar, S., & Kumar, S. (2012). *Vastu for home and office*. Delhi: Vij Books.
- Lah, N. A. A., Wahab, M. H. A., Koh, D., & Saruwono, M. (2015). Metaphysical approach for design functionality in Malay-Islamic architecture. *Procedia-Social and Behavioral Sciences*, 202, 273-284.
- Leung, M. Y., Famakin, I. O., & Wang, C. (2019). Developing an integrated indoor built environment-quality of life model for the elderly in public and subsidized housing. *Engineering, Construction and Architectural Management*, 26(7), 1498-1517.
- Madeddu, M., & Zhang, X. (2017). Harmonious spaces: The influence of Feng Shui on urban form and design. *Journal of Urban Design*, 22(6), 709-725.
- Yogi, M. M. (1998). *Celebrating perfection in administration: Creating invincible India*. India, Age of Enlightenment Publications.
- Maharishi Vedic University (MVU). (1998). *Building for the health and happiness of everyone: Creating ideal housing in harmony with natural law*. Vlodrop, The Netherlands: Maharishi Vedic University Press.
- Maharishi Vedic University (MVU). (2009). *Maharishi Vedic University: Knowledge for enlightenment and national invincibility*. The Netherlands: Maharishi Vedic University Press.
- Maheshwari, A. K., & Werd, M. R. P. (2019). Architecture and creativity: Examining the impact of Maharishi Vastu on workplace creativity. *Creativity Research Journal*, 31(4), 371-376.
- Maheshwari, A., & Werd, M. R. P. (2020). Creativity and workforce development: A preliminary empirical study of Maharishi Vedic Architecture. *Journal of Maharishi Vedic Research Institute*, 13, 113-137.
- Michalos, A. C. (2008). Education, happiness and wellbeing. *Social Indicators Research*, 87, 347-366.
- Ministry of Architecture. (2017). *How to build a peace palace*. Vlodrop, The Netherlands: *Global Country of World Peace*, Maharishi Vedic University Press.
- Morton, E., Michalak, E. E., & Murray, G. (2017). What does quality of life refer to in bipolar disorders research? A systematic review of the construct's definition, usage and measurement. *Journal of Affective Disorders*, 212, 128-137.
- Nader, T. (2013). *Consciousness is primary: Illuminating the leading edge of knowledge*. Fairfield, IA: Maharishi University of Management Press.
- Nathan, V. (2015). *Vastu geometry: Beyond building codes*. In K. Williams & M. J. Ostwald (Eds.), *Architecture and mathematics from antiquity to the future*, Volume I: Antiquity to the 1500s (pp. 375-388). Birkhäuser, Cham.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1-13.
- Planck, M. (1931). *Interview with Max Planck*, *The Observer*, 25 January 1931.
- Silva, B. N., Khan, M., & Han, K. (2018). Towards sustainable smart cities: A review of trends, architectures, components, and open challenges in smart cities. *Sustainable Cities and Society*, 38, 697-713.
- Sirgy, M. J., & Lee, D. J. (2018). Work-life balance: An integrative review. *Applied Research in Quality of Life*, 13(1), 229-254.
- Smith, D., Metcalfe, P., & Lommerse, M. (2012). Interior architecture as an agent for wellbeing. *Journal of the Home Economics Institute of Australia*, 19(3), 2-9.
- Sprecher, K. E., Kosciak, R. L., Carlsson, C. M., Zetterberg, H., Blennow, K., Okonkwo, O. C., ... & Bendlin, B. B. (2017). Poor sleep is associated with CSF biomarkers of amyloid pathology in cognitively normal adults. *Neurology*, 89(5), 445-453.
- St. Jean, B. (2013). Participant reactivity in a longitudinal mixed-method study of the information behavior of people with type-2 diabetes: Research validity vs. 'street validity'. In *Proceedings of the American Society for Information Science and Technology (ASIS 2013)*, 1-6 November 2013, Montreal, Quebec, Canada. doi: 10.1002/meet.14505001063
- Travis, F., Bonshek, A., Butler, V., Rainforth, M., Alexander, C. N., Khare, R., & Lipman, J. (2005). Can a building's orientation affect the quality of life of the people within? Testing principles of Maharishi Sthapatya Veda. *Journal of Social Behavior and Personality*, 17, 553-564.
- Trompeter, H. R., de Kleine, E., & Bohlmeijer, E. T. (2017). Why does positive mental health buffer against psychopathology? An exploratory study on self-compassion as a resilience mechanism and adaptive emotion regulation strategy. *Cognitive Therapy and Research*, 41(3), 459-468.
- Utian, W. H., Janata, J. W., Kingsberg, S. A., Schluchter, M., & Hamilton, J. C. (2018). The Utian Quality of Life (UQOL) Scale: Development and validation of an instrument to quantify quality of life through and beyond menopause. *Menopause*, 25(11), 1224-1231.
- Venugopal, J. (2012). Vastu Purusha Mandala: A human ecological framework for designing living environments. *Advances in Architecture and Civil Engineering*, 2(1), 870-877.
- Vijayan, M. Y. (2018). Entrance gateway of Kerala temples: Assessing the form of a Kerala temple gopuram through material and construction. In A. Catalani, Z. Nour, A. Versaci, D. Hawkes, H. Bougdah, A. Sotoco, M. Ghoneem & F. Trapani (Eds.), *Cities' identity through architecture and arts*. London, UK: Taylor & Francis Group; and *Proceedings of the International Conference on Cities' Identity through Architecture and Arts (CITAA 2017)*, May 11-13, 2017, Cairo, Egypt.

