THE RELATIONSHIP BETWEEN COMPLEXITY, PREFERENCE AND RESTORATIVE POTENTIAL OF INTERIORS

A Master's Thesis

by

AYBÜKE GEYİK

Department of
Interior Architecture and Environmental Design
İhsan Doğramacı Bilkent University
Ankara
July 2018

AYBÜKE GEYİK
THE RELATIONSHIP BETWEEN COMPLEXITY, PREFERENCE
AND RESTORATIVE POTENTIAL OF INTERIORS
Bilkent University 2018

THE RELATIONSHIP BETWEEN COMPLEXITY, PREFERENCE AND RESTORATIVE POTENTIAL OF INTERIORS

The Graduate School of Economics and Social Sciences
of
İhsan Doğramacı Bilkent University

by

AYBÜKE GEYİK

In Partial Fulfillment of the Requirements for the Degree of
MASTER OF FINE ARTS

THE DEPARTMENT OF
INTERIOR ARCHITECTURE AND ENVIRONMENTAL DESIGN
İHSAN DOĞRAMACI BİLKENT UNIVERSITY
ANKARA

July 2018

I certify that I have read this thesis and have found that is fully adequate, in scope and in quality, as a thesis for the degree of Master of Fine Arts in Interior Architecture and Environmental Design.

Asst. Prof. Dr.Çağrı İmamoğlu
Supervisor

I certify that I have read this thesis and have found that is fully adequate, in scope and in quality, as a thesis for the degree of Master of Fine Arts in Interior Architecture and Environmental Design.

Asst. Prof. Dr. Semiha Yılmazer
Examining Committee Member

I certify that I have read this thesis and have found that is fully adequate, in scope and in quality, as a thesis for the degree of Master of Fine Arts in Interior Architecture and Environmental Design.

Asst. Prof. Dr. Susana ALVES
Examining Committee Member

Approval of the Graduate School of Economics and Social Sciences

---
Prof. Dr. Halime Demirkan
Director

ABSTRACT

THE RELATIONSHIP BETWEEN COMPLEXITY, PREFERENCE AND RESTORATIVE POTENTIAL OF INTERIORS

Geyik, Aybüke

MFA, Department of Interior Architecture and Environmental Design

Advisor: Assist. Prof. Dr. Çağrı İmamoğlu

July 2018

The main aim of the present study is to investigate the relationship between complexity, preference and restorative potential of interiors. Eighteen black and white images of third places such as cafes, restaurants, and lounges were rated by 100 non-designer university students from three universities. They rated the images on preference, complexity, familiarity, perceived restoration potential and restoration components (being away, fascination, extent, compatibility). A single-item version of Perceived Restorativeness Scale was adapted to measure the restorative potential of interior spaces. Pearson's Correlation, repeated measures ANOVAs and a mediation analysis were conducted. The results showed that preference a was positively correlated with both complexity and components of restoration. Complexity was positively correlated to fascination, extent, and compatibility. Fascination, Extent, and Compatibility mediated the effect of complexity on preference.

Keywords: Attention Restoration Theory, Complexity, Preference, Restorative Environments, Third Places

ÖZET

İÇ MEKANLARDA PSİKOLOJİK YENİLENME POTANSİYELİ, KARMAŞIKLIK VE BEĞENİ İLİŞKİSİ

Geyik, Aybüke

İç Mimarlık ve Çevre Tasarımı Yüksek Lisans Programı

Tez Danışmanı: Dr. Öğr. Üyesi Çağrı İmamoğlu

Temmuz 2018

Bu çalışmanın amacı, iç mekanlarda karmaşıklık, beğeni ve psikolojik yenilenme potansiyeli arasındaki ilişkiyi incelemektir. On sekiz adet siyah-beyaz kafe, restoran, lobi, bekleme alanı gibi üçüncül mekan fotoğrafı üç farklı üniversiteden tasarım alanı dışındaki bölümlerde okumakta olan 100 öğrenci tarafından değerlendirilmiştir. Değerlendirme, karmaşıklık, beğeni, aşinalık, yenilenme/tazelenme potansiyeli, psikolojik uzaklaşma sağlama potansiyeli, hayranlık uyandırma potansiyeli, uyumlu/ahenkli olma ve beklentilere uygunluk potansiyeli üzerine yapılmıştır. Algılanan Yenilenme Potansiyeli Testinin tek maddelik versiyonu iç mekanlarda yenilenme potansiyelini ölçmek için uyarlanmıştır. Pearson korelasyon analizi, tekrarlı varyans analizi ve aracı değişken analizi yapılmıştır. Sonuçlar beğeninin karmaşıklık ve psikolojik yenilenme potansiyelinin bileşenleri ile pozitif bir ilişkisi olduğunu göstermiştir. Karmaşıklığın hayranlık uyandırma potansiyeli, uyumlu/ahenkli olma ve beklentilere uygunluk potansiyeli ile pozitif bir ilişkisi çıkmıştır. Hayranlık uyandırma potansiyeli ve uyumlu/ahenkli olma, karmaşıklığın beğeni üzerine etkisinde aracı değişkenler olarak çıkmıştır.

Anahtar Kelimeler: Beğeni, Dikkat Restorasyonu Teorisi, Karmaşıklık, Üçüncü Mekanlar, Yenileyici Çevreler

ACKNOWLEDGEMENTS

First, I would like to express my gratitude to Asst. Prof. Dr. Çağrı İmamoğlu for his endless support, patience, understanding and guidance throughout my education and preparation of this thesis.

I would like to thank to my jury members Asst. Prof. Dr. Semiha Yılmazer and Asst. Prof. Dr. Susana Alves for their contributions and valuable feedbacks.

My grateful thanks are also extended to all faculty members of İhsan Doğramacı Bilkent University Department of Interior Architecture and Environmental Design.

I would also like to thank all of my friends for encouraging me and for being there for me whenever I need them.

Lastly, I wish to thank my family for their unconditional support and endless patience.

TABLE OF CONTENTS

ABSTRACT ..... **iv**
ÖZET ..... **v**
ACKNOWLEDGEMENTS ..... **vii**
TABLE OF CONTENTS ..... **viii**
LIST OF TABLES ..... **x**
LIST OF FIGURES ..... **xi**
CHAPTER I - INTRODUCTION **1**
1.1 Problem Definition and Thesis Objectives 4
1.2 Structure of the Thesis 4
CHAPTER II – PREFERENCE AND COMPLEXITY **6**
2.1 Aesthetic Preference 6
2.2 Complexity 7
2.3 Relationship Between Preference and Complexity 8
2.4 Preferences for Interior Spaces and Complexity 9
2.5 The Effect of Familiarity on Preference and Perception of Complexity 11
CHAPTER III - RESTORATION **12**
3.1 Attention Restoration Theory 13
3.1.1 Being Away 15
3.1.2 Fascination 16
3.1.3 Extent 17
3.1.4 Compatibility 18
3.2 Measuring Restoration 19
3.3 Restorative Environments 20
3.3.1 Restorative Potential of Natural Environments 20
3.3.2 Restorative Potential of Urban Environments 21
3.3.3 Restorative Potential of Soundscapes 22
3.3.4 Restorative Potential of Interiors Spaces 23
3.3.5 Restorative Potential of Third Places 24

3.4 Relationship between Preference and Restoration 24
3.5 Summary of the Literature 26
CHAPTER IV - METHODOLOGY 27
3.1 Aim of the Study 27
3.1.1 Research Questions 28
3.1.2 Hypotheses 28
3.2 Instruments 30
3.2.1 Images 30
3.2.2 Questionnaire 33
3.3 Method of the Study 36
3.3.1 Procedure 36
3.3.2 Sample 36
CHAPTER V - RESULTS 37
4.1. Reliability Checks of the Scale and Images 37
4.2 Relationship Between Perceived Complexity and Preference 39
4.3 Relationship Between Preference and Restoration 40
4.4 Relationship Between Complexity and Restoration 40
4.5 Relationship Between Restoration Components and Perceived Restoration Potential 41
4.6 Relationship Between Familiarity, Preference and Complexity 41
4.8 Mediation Analysis 43
CHAPTER VI - DISCUSSION 49
CHAPTER VII - CONCLUSION 56
REFERENCES 58
APPENDICES 76
APPENDIX A 77
APPENDIX B 78
APPENDIX C 79
APPENDIX D 80
APPENDIX E 99
APPENDIX F 100

LIST OF TABLES

1. Definitions of Variables 34

2. Pearson's Correlation Results 39

3. Regression Analysis: Complexity as Predictor of Preference 45

4. Regression Analysis: Complexity as Predictor of Restoration Components 46

5. Multiple Regression Analysis: Complexity and Restoration Components as predictors of Preference 46

LIST OF FIGURES

1. Images 32

2. Perceived Complexity – Manipulated Complexity Graph 38

3. Familiarity, Preference and PRP – Manipulated Complexity Graph 42

4. Mediation Model: Perceived Complexity as predictor of Preference and Restoration Components as Mediators 44

5. Results of Mediation Model 47

CHAPTER I

INTRODUCTION

Restoration in environmental psychology is defined as a psychological recovery that is driven by a specific environment (Joye & van der Berg, 2012). Research on restorative environments followed two different theories with different interpretations of the construct restoration (Joye & van der Berg, 2012). Stress Recovery Theory (Ulrich, 1981) is related to the restoration from the stress in demanding or stressing situations. Attention Restoration Theory (Kaplan, 1989), on the other hand, focuses on the restoration from attentional fatigue that is caused by engagement in tasks that require prolonged mental effort (Joye & van der Berg, 2012).

According to ART, restorative environments which help to recover from attentional fatigue have four qualities. *Being away* is feeling of distance from daily routines and goals that require directed attention. *Fascination* is an effortless attention provoked by exploration or qualities of the environment. *Extent* refers to the “scope for involvement” with the environment and the degree of “coherence and order”. *Compatibility* is how much an environment supports a person’s activities (Lindal & Hartig, 2013, p. 27).

Restorative potential of natural environments is examined and supported in many studies (Bodin & Hartig, 2003; Cole & Hall, 2010; Hartig, Evans, Jamner, Davis, & Gärling, 2003; Karmanov & Hamel, 2008; Korpela & Kinnunen, 2011; Lafortezza, Carrus, Sanesi, & Davies, 2009; Lee, Williams, Sargent, Williams, & Johnson, 2015; Mayer, Frantz, Bruehlman-Senecal, & Dolliver, 2009; Merritt, 2017; Nordh, Alalouch, & Hartig, 2011; Pahl & Wyles, 2012; Staats, Hartig, & Kieviets, 2000; Tyrväinen et al., 2014; Ulrich et al., 1991; van den Berg, Joye, & Koole, 2016; van den Berg, Maas, Verheij, & Groenewegen, 2010). Some other studies on impact of natural elements was conducted in different settings such as hospitals (Bengtsson & Grahn, 2014; Moore, 2007; Nejati, Shepley, Rodiek, Lee, & Varni, 2016), schools (Altaher & Runnerstrom, 2018; Bagot, Allen, & Toukhsati, 2015; Bristow, Chau, Horoshenkov, & Choy, 2013; Chawla, Keena, Pevec, & Stanley, 2014; Felsten, 2009; Gulwadi, 2006; Hipp, Gulwadi, Alves, & Sequeira, 2015; Mejía-Castillo, López-Suárez, Estrada Rodríguez, & Lagunes-Córdoba,

2016), soundscapes (Jahncke, Eriksson, & Naula, 2012, 2015; Payne, 2008; Ratcliffe, Gatersleben, & Sowden, 2016; Zhang, Kang, & Kang, 2017), virtual environments (Jones, Farley, & Murphy, 2017; Kuper, 2017; Nejati, Rodiek, & Shepley, 2016; Stone, Small, Knight, Qian, & Shingari, 2014; Tabrizian, Baran, Smith, & Meentemeyer, 2018; Valtchanov, Barton, & Ellard, 2010), workplace (Calogiuri et al., 2016; Gilchrist, Brown, & Montarzino, 2015; Loder, 2014; Mangone, Capaldi, van Allen, & Luscuere, 2017) and urban spaces (Lindal & Hartig, 2013, 2015; Nasar & Terzano, 2010; San Juan, Subiza-Perez, & Vozmediano, 2017; Staats, Jahncke, Herzog, & Hartig, 2016). Studies on restorative qualities of interior spaces are mainly limited to the usage of natural elements (Bringslimark, Hartig, & Patil, 2009; Chen, Wang, Chen, & Chang, 2014; Han & Hung, 2011; Nejati, Shepley et al., 2016; Raanaas, Evensen, Rich, Sjøstrøm, & Patil, 2011; Shibata & Suzuki, 2004).

Previous studies suggest a relationship between preference and restorative potential of an environment (Abkar, Mustafa Kamal, Maulan, Mariapan, & Davoodi, 2011; Hartig & Staats, 2006; Krzywicka & Byrka, 2017; Scopelliti & Vittoria Giuliani, 2004; van den Berg, Hartig, & Staats, 2007; van den Berg, Koole, & van der Wulp, 2003). In the scope of these studies, this thesis aims to investigate the restorative potential of interiors. Scott's (Scott, 1993b, 1993a) studies shows that natural elements, spaciousness, mystery and complexity are the mostly preferred qualities of interiors. Considering the presence of the studies on natural elements and subjective nature of

mystery, this study will use complexity as a predictor of preference to assess the restorative potential of interiors.

1.1 Problem Definition and Thesis Objectives

Based on the literature review, it can be said that restorative environments are helpful for recovering from psychological fatigue resulted from tasks required for work and daily life. Natural environments are proven to have great restorative potentials, however, not many people have access to a nearby natural environment to visit when they feel fatigued. Therefore, restorative qualities of environments people are exposed everyday should be increased. The aim of the present study is to examine the possibility of restoration prompted by environmental qualities of interiors. Starting from the literature that relates restoration with preferences, complexity, one of the most preferred qualities of interiors, is investigated in this study. Therefore, the main aim of the study is to examine the relationship between complexity and preference for interior environments and find out whether this relationship is mediated by restorative potential.

1.2 Structure of the Thesis

This thesis consists of five chapters. First chapter of the thesis includes an introduction to the topic and summarizes the aims of the study and the structure of the thesis. Chapter Two summarizes the literature on aesthetical preference, complexity and their relationship. Chapter Three includes a literature review in which restoration and attention restoration is explained.

Later, qualities of restorative environments are defined and some examples from previous studies are given. The relationship between environmental preferences and restorative potential is explained. Based on this relationship, interior preferences and complexity are summarized. Lastly, possible effect of familiarity on preference and complexity is mentioned. In Chapter Four, methodology of the study is explained. First, the main aim, research questions and hypotheses of the study are given. Later, method of the study, instruments and sample are explained. In the next chapter, results of the study are given without any interpretations. In the Chapter Six, results of the study, probable limitations and further research possibilities are discussed. Finally, the study is summarized and the place of the study in the literature is discussed.

CHAPTER II

PREFERENCE and COMPLEXITY

2.1 Aesthetic Preference

According to Nugent (2013), aesthetic preference refers to the degree that “a certain stimulus is selected over another stimulus for cosmetic purposes. Gustav Theodor Fechner was the founder of the field of psychophysics and also the first researcher to study aesthetic preferences (Roberts, 2007). Fechner started studying aesthetical preferences of single artwork in depth, and later moved onto large numbers of objects (Cupchik, 1986). He developed three methods to measure aesthetic preferences. The first one was to make respondents compare the pleasantness of different stimuli. In the second one, participants created an object according to their own taste and liking by drawing or manipulating objects. The last one was to examine objects in order to understand which features appear most frequently in preferred ones (Fechner, 1876).

Later, Berlyne (1971) developed a research program to find out hedonic laws to understand preferences of people for certain stimuli. His research was the beginning of modern experimental aesthetics. According Berlyne (1971) organisms choose environmental stimuli according to their potential to increase or decrease their degree of arousal. As a result, complexity was regarded as one of the most significant qualities of visual stimuli for aesthetic preference. Berlyne (1971) suggested that people are likely to choose moderately complex stimuli over simple or very complex ones.

2.2 Complexity

According to Berlyne (1971) complexity is the amount of visual information that is offered in an environment and it is related to number and variety of elements existing . Heylighen (1999) also suggest variety in the visual stimulus is related to complexity. According to Osbornme & Farley (1970) complexity is related to the way the elements of “line, size, shape, direction, color, texture” come together and yield contrast, harmony, dominance, balance and rhythm (Osborne & Farley, 1970, p. 69). “irregularity of arrangement, amount of material, heterogeneity of elements, shape irregularity, number of independent units, asymmetry, and random distribution” are some features that affect the perception of complexity (Berlyne & Peckham, 1966, p. 128).

Berlyne (1971) suggested that complexity is not only related to objective complexity qualities, but also related to subjective complexity. The perceived

complexity is related to how a person perceptually organizes the scene. Recent studies supported this idea that subjective complexity does not only depend on the factors such as number of elements or heterogeneity, but they are also related to the way existing features are organized to form a coherent scene (Hogeboom & van Leeuwen, 1997; Strother & Kubovy, 2003).

2.3 Relationship Between Preference and Complexity

Previous studies showed different results about the relationship between complexity and preferences. Some studies suggested an inverted U-shape relationship between complexity and preference, where moderate level of complexity is mostly preferred (Berlyne, 1971; Farley & Weinstock, 1980; Güçlütürk, Jacobs, & van Lier, 2016; Imamoglu, 2000; Saklofske, 1975; Vitz, 1966), while some others suggested a positive linear relationship (Willis & Dornbush, 1968; Wohlwill, 1976). According to Nadal et al. (2010, p. 173) differences between findings regarding the association between complexity and preference may be related to variances of “conceptualization and operationalization of visual complexity, motivation, and response”.

Stephen and Rachel Kaplan (1982) supported the importance of “enriched and involving” environments but they propose different possible reasons for the relationship between environmental preference and complexity. They suggested that environmental information is essential for satisfying basic human needs and suggested that complexity of an environment is valued because of its “information value”, not for its “capacity to stimulate and arouse”. Kaplans advocate that people are fascinated with exploration and

gaining environmental knowledge because they need them to construct and expand a mental image of the environment to survive. This helps them to “get around, predict events or plan actions”. Therefore, people choose complex and information-rich settings because they offer involvement, exploration and environmental knowledge.

2.4 Preferences for Interior Spaces and Complexity

Similarly to the findings of previous studies, complexity was found to be related with preferences in many studies. A meta-analysis by Dosen and Ostwald (2015) evaluated four main features that was proposed to be related to perceived well-being which are prospect, refuge, mystery and complexity. Out of eleven studies analyzed in the paper in terms of preference for interiors spaces, six supported Hildebrand’s (1999) suggestions about importance of visual complexity in environmental preference. Finding suggested complexity as the second most important feature for interior settings after prospect.

In one of the mentioned studies, Scott (1993a, p. 9) investigated the visual attributes related to preference of interior environments. Three hundred and twenty-one college students evaluated an image pool that consisted of 80 black and white interior photographs. Images were chosen by four expert jury members from University of Wisconsin-Madison and jury members assessed the settings considering their visual attributes such as "geometric shape, spaciousness, spatial organization, surface texture, pattern and value,

lighting and presence of plants, windows etc)". Results of the study showed that attributes of preferred scenes were plants (56%), spaciousness (39%) , complexity (%34), varied spatial configuration (30.8%), windows (27%) and so on (Scott, 1993a, p. 9).

In another study Scott (1993b) investigated the relationship between preference, complexity and mystery levels of interiors and analyzed the results to find out environmental features that affect the complexity and mysterty. The results of the Scott's (1993b) study on mystery and complexity as predictors of preference also indicated a high correlation between them. Respondents rated 80 images on preference, complexity and mystery. Analysis of the attributes of setting demonstrated certain characteristics are effective on complexity of interiors; The quantity and variety architectural elements, furnishing, accessories and finishing increased the complexity. Varied, complicated, ill-defined spatial configurations also increase the complexity of the environment. Simple linear and grid organizations made scenes perceived as less complex while more complicated and irregular compositions were usually rated more complex. Uniform compositions and arrangements of lighting fixtures, furniture and accessories also lowered the complexity (Scott, 1993b, p. 28).

Later, to assess the effect of culture on the relationship between complexity and preference, Ham, Guerin and Scott (2004) compared the results of studies conducted with samples from different cultures. They used the same

method and instruments as Scott's (1989) study of 321 American students, with a new sample of 312 Chinese students. The results showed that Chinese students preferred setting with lower complexity levels and optimal complexity level for Chinese students were lower than the American students.

2.5 The Effect of Familiarity on Preference and Perception of Complexity

Studies show that familiarity with an environment may affect preference and perceived complexity of environment. While one line of studies suggest a positive relationship between familiarity and preference (Cantor, 1968; Cantor & Kubose, 1969; Faw & Nunnally, 1971; Lemond, Durham, Slater, Wilson, & Nunnally, 1974), others indicate a negative relationship (Zajonc, 1968; Zajonc, Swap, Harrison, & Roberts, 1971). Berlyne (1970), on the other hand, argues that the relation between familiarity and preference is negative for low complexity and positive in high complexity. Similarly, Wickelgren (1979) states that people get bored with low complexity and get overwhelmed by high complexity. However, familiarity with complex settings may increase the preference towards the environment (Wickelgren, 1979).

Besides preference, familiarity also changes the perception of complexity. Familiarity with an environment effects how complex people think an environment is. More familiar, therefore easier to process environments seem less complex than unfamiliar visuals (Imamoglu, 2000; Wickelgren, 1979; Zajonc, 1968).

CHAPTER III

RESTORATION

The term restoration in environmental psychology refers to a psychological recovery that is prompted by a particular environment (Joye & van der Berg, 2012). Research on restoration in environmental psychology has mainly been guided by two theories: Stress Recovery Theory (SRT) and Attention Restoration Theory (ART). Both of these theories have a different interpretation of the construct restoration (Joye & van der Berg, 2012).

Stress Recovery Theory is proposed by Ulrich et al. (1991) and it is concerned with the restoration from the stress which may occur when a person is faced with a situation that is perceived as "demanding or stressing" (Joye & van der Berg, 2012). Attention Restoration Theory (Kaplan, 1995), on the other hand, focuses on the restoration from attentional fatigue that is related to engagement in tasks that require prolonged mental effort

(Joye & van der Berg, 2012). The present study will focus on the Attention Restoration Theory.

3.1 Attention Restoration Theory

Attention Restoration Theory, developed by Kaplan (1995), is based on James' s (1892) definition of two different types of attention (Kaplan & Berman, 2010, p. 46). According to James (1892), attention can be sorted into two different categories. Directed attention (voluntary attention in his terms) requires mental effort to maintain, while involuntary attention feels automatic and effortless. Studies in cognitive neurology showed that directed attention is more dependent to frontal and parietal brain regions that are involved in cognitive control than involuntary attention (Corbetta & Shulman, 2002).

Directed and involuntary attention have different uses. Directed attention is an attention mechanism that plays an important role in focusing on unappealing work and "fighting off distractions". It also enables individuals to sort important stimuli from others in daily life (Kaplan, 2016, p. 481). Directed attention is largely intentional and controlled (Kaplan, 2016, p. 481). Unlike directed attention, stimuli that attract involuntary attention has ‘‘direct exciting quality’’ (Kaplan & Berman, 2010, p. 46). Examples of such stimuli are ‘‘strange things, moving things, wild animals, bright things, pretty things, metallic things, words, blows, blood, etc. etc. etc’’ (James, 1892, p. 417) .

Kaplan and Bremen suggest that involuntary attention must have been “an adaptive force” as it used to direct the attention toward the things that were important once. When what is important have been changed in modern times, however, required type of attention for focusing on what is important also changed. While interesting things that attract involuntary effort are irrelevant and even distractive; important things are not stimulating anymore, therefore they require an effort and voluntary attention. This change results in directed attention to be more in demand and sometimes this need may even be higher than the capacity (Kaplan & Berman, 2010, p. 48). Today, people are exposed to a great number of visual stimuli in daily life, because of the developments on technologies such as smartphones and televisions. Images and advertisements are becoming more distractive and makes it harder to focus on the things that require directed attention. This is causing a fatigue of directed attention mechanisms.

Directed attention is essential for performing task and prolonged use of directed attention causes attentional fatigue. Results of overuse of directed attention may include losing concentration, experiencing mental work as unusually effortful, and getting easily irritated by distractions. All these symptoms are interpreted as signs of a need for a break. At this point, spending time in environments that promote restoration by utilizing involuntary attention instead of directed attention can provide recovery from attentional fatigue (Kaplan & Talbot, 1983, p. 188).

Today, attentional fatigue may not be easy to avoid, and therefore, restoring the ability of proper functioning of attention mechanisms is essential. Kaplan (1995) suggests three ways for the restoration of directed attention. Sleeping, meditating or utilizing involuntary attention so to avoid using directed attention, which agrees with Bargh and Chartrand's (1999) suggestion that involuntary attention free one's mind of voluntary attention (Kaplan & Berman, 2010, p. 48).

According to the ART framework, spending time in some environments can promote recovery from attentional fatigue. These restorative environments have four distinct qualities: being away, fascination, coherence, and compatibility.

3.1.1 Being Away

Being away from the ordinary or routine aspects of life promotes psychological restoration. Kaplan defines three forms of being away. The first one is literally getting away from undesirable distraction. The second form is to put aside the work that one wants to escape from. "Here the escape is from a particular content, and perhaps from anything that might serve as a reminder of that content" (Kaplan & Talbot, 1983, pp. 187–188).

The third kind is more internal and means having a rest from following certain purposes, and intellectual efforts. An experience of escape may involve one or more of these three types. The strongest condition would be experiencing

all of them together. However, it is not true to say that such a mixture would certainly create restorative effect (Kaplan & Talbot, 1983, pp. 187–188).

3.1.2 Fascination

According to Kaplan and Talbot (Kaplan & Talbot, 1983, p. 188), fascination is "an experience when attention is effortless" and it coincides with involuntary attention. It provides effortless and voluntary attention that is inherited in the environment and helps people to rest the directed attention mechanism required for everyday tasks (Kaplan & Talbot, 1983, p. 188). Fascination can derive from content or process. The link between fascination and restoration may not always be straightforward. Fascination may be provoked by soft and hard extremes and some hard extremes such as violence may have an undesirable impact on mental and emotional states. Kaplan (1983) defines soft fascination as “an experience of moderate fascination with aesthetically pleasing stimuli”. Soft fascination has “pleasantness and intensity dimensions” besides the functionality dimension (Herzog, Black, Fountaine, Knotts, & Herzog, 1997, p. 166). According to Hartig, Korpela, Evans, & Gärling (1997) , even though soft fascination is considered the most beneficial to restoration, stronger fascinations may also contribute to restoration, especially when they suit the perceptual/cognitive framework needed for a sense of extent.

3.1.3 Extent

According to Kaplans (1989), extent refers to the “scope for involvement” and the “degree of coherence and order in the environment” (Lindal & Hartig, 2013, p. 27). It is regarded as a function of connectedness which refers to “relatedness of immediately perceived elements to one other and to a larger structure, such as a mental representation of the area” (1997, p. 177). Coherence is how easily one can “organize and structure” a scene (Kaplan & Kaplan, 1989, p. 183) and it is found to be related with environmental preferences (Herzog et al., 1997; Kaplan & Kaplan, 1989; (Kaplan & Talbot, 1983).

Hartig (1997, p. 177) defines scope as “the scale of the domain in which the perceptual and organizational activity is situated”. The domain can include instant environments as well as those areas that are not in the sight but imagined. Scope also includes conceptual areas such as intellectual problems or imaginary worlds. Extent “relies on the structuring of perceptual and conceptual elements and the scale of the frame of reference to which the organized elements might, in turn, be related”. This means “frame of reference” may be in a complete “conceptual or imaginary realm”, and extent does not have to be experienced only in physical environments but can also be experienced through involvement in “intellectual activities” (Hartig, Korpela et al., 1997, p. 177).

3.1.4 Compatibility

Compatibility is the consistency between a person's goals, “the demands made on the person by environmental conditions”, and “the information that the environment offers to support intended activities” (Kaplan, 1983, p. 185). That means, activities in an environment is “a function of environmental dictates and personal intentions”. It is also related to the possibility for involving in an activity as a result of the information provided by the environment. Therefore, compatibility can also be high when a person wishes to do what the environment “demands and supports”. Combability is higher if the information an environment offers is interesting and helps to create a sense of extent (Hartig, Korpela et al., 1997).

These properties are not absolute, and they can vary across a wide range. An environment can be stronger in one of these properties than others; however, the stronger an environment have these properties, the more restorative an environment would be. Additional to these qualities, aesthetic components in a setting can increase the depth of restorative experience. Depth of the restorative experience provides a faster recovery from directed attention fatigue and also helps to engage in "reflection". This engagement results in a "internal housekeeping" and allows people to "function with less demand on directed attention in the future" (Kaplan, Bardwell, & Slakter, 1993, p. 728).

3.2 Measuring Restoration

Studies on restorative environments have used two different methods to measure the restorative potential. Some researchers measured the real restorative impact, such as increases in positive mood, performance on concentration tests, and changes in physiological measures (Hartig, Böök, Garvill, Olsson, & Gärling, 1996; Hartig, Evans, & Mang, 1991; Ulrich et al., 1991). These types of measurement are “less prone to response biases” (van den Berg et al., 2003, p. 137) but they are still not “one-to-one” measurements of restorative environments since restoration depends both on restorative qualities of environments and the need for psychological restoration of the individual.

Another line of research used self-reports of perceived restorative potential. Hartig and colleagues (Hartig, Kaiser, & Bowler, 1997; Hartig & Korpela, 1996; Hartig, Korpela et al., 1997) developed a multi-item Likert-scale questionnaire called Perceived Restorativeness Scale (See Appendix A). PRS which identified four components of restorative environments (being away, fascination, coherence (extent) and compatibility) and measured them with multi-item questions.

Using multi-item scale was exhausting and time consuming. Therefore, latest studies on restorative environments used single-item scales in order not to exhaust the participants with long questionnaires and to be able to show more images to the respondents (Abdulkarim & Nasar, 2014, 2014; Berto, 2005; Felsten, 2009; Herzog, Maguire, & Nebel, 2003; Lindal & Hartig, 2013).

Short versions of the PRS was found as reliable and correlated as the long versions (Berto, 2005). Some researchers adapted Hartig's PRS scale and turned it into a 4-item scale (being away, fascination, extent and compatibility) by using the definitions from the long version of the scale. Some others used Berto's (2005) 5 item version of the PRS (See Appendix B). Berto's (2005) short version of PRS has 5 items because it evaluates extent with two different constructs; scope and coherence.

3.3 Restorative Environments

3.3.1 Restorative Potential of Natural Environments

Restorative benefits of nature are examined and supported by many studies in the literature (Bodin & Hartig, 2003; Cole & Hall, 2010; Hartig et al., 2003; Karmanov & Hamel, 2008; Korpela & Kinnunen, 2011; Lafortezza et al., 2009; Lee et al., 2015; Mayer et al., 2009; Merritt, 2017; Nordh et al., 2011; Pahl & Wyles, 2012; Staats et al., 2000; Tyrväinen et al., 2014; Ulrich et al., 1991; van den Berg et al., 2010; van den Berg et al., 2016). Hartig, Evans and Mang (1991) compared the pre and post attention performances on a proof reading task of three different groups which either went on a wilderness backpack, a non-wilderness vacation and a group who stayed at home. Pre-vacation results were similar for all groups and only the backpacking group had an increase after the vacation period, while the other two groups had a decrease at the results of the proof reading test.

Studies also showed that natural environments have a positive effect on attention restoration for children. Schutte, Torquati, & Beattie (2016) investigated the effects of walks in natural and urban areas on children's

cognitive functioning. Thirty tree preschool and 34 school aged children participated in activities to create attention fatigue. After that they walked along an urban street in one session and in a park in the other one. Later, they completed tasks to measure assessments of working memory, inhibitory control, and attention. Children showed higher results on attention test after the nature walk. Inhibitory control or verbal working did not increase but working memory remained more stable after the nature walk (Schutte et al., 2016, p. 3).

3.3.2 Restorative Potential of Urban Environments

Even though they are limited compared to natural environments, some studies examined the restorative potential of urban spaces (Abdulkarim & Nasar, 2014; Lindal & Hartig, 2013, 2015; Nasar & Terzano, 2010; San Juan et al., 2017; Staats et al., 2016). Abdulkarim and Nasar (2014) examined whether elements (seating, triangulation and food) that increase livability of an environment as claimed by Whyte (1980) effected the restorativeness of public plazas. Sixty participants rated the manipulated images of the plazas on the five item PRS_5 scale by Berto (2005). Results indicated that plazas with triangulation or plazas with both triangulation and seats had high restorativeness, but images with all three elements together showed lower perceived restorativeness than plazas with two of the items.

In order to assess the restorative potential of streetscapes, Lindal and Hartig (Lindal & Hartig, 2013) examined the relationship between restorative

potential and three physical variables related with architectural preference. An image pool of 147 computer generated streetscape images (divided to two sets) were created by manipulation of three physical variables (roofline, building height and surface attributes). Two hundred and sixty and three participants rated a set of images on one of the three psychological variables (being away, fascination and perceived restorative potential with one item). At the lower end of the entropy scale, increasing streetscape entropy positively affected perceived restorative potential. The influence of streetscape entropy on perceived restoration likelihood is mediated by being away and fascination. Streetscape building height had a negative relation with perceived restoration likelihood. The influence of streetscape building height on restoration likelihood was mediated by being away (Lindal & Hartig, 2013).

3.3.3 Restorative Potential of Soundscapes

Studies show that restorative environments are not limited with visual environments. Auditive settings can also offer restorative potential (Jahncke et al., 2012, 2015; Payne, 2008; Ratcliffe et al., 2016; Zhang et al., 2017). Jahncke, Eriksson and Naula (2015) examined the effect of different types of auditive settings on restorative potential when paired with different visual settings. Forty participants evaluated images of an open plan office and urban nature under four sound conditions (nature sound, quiet, broadband noise, office noise). Settings were rated for their restorative qualities, restoration likelihood and attitude. The results showed that nature sounds

had the higher restorative potential followed by quiet spaces. The lowest restoration potential was with office sounds in both natural and office settings.

3.3.4 Restorative Potential of Interiors Spaces

Studies on restorative potential of interiors so far are limited to effect of presence of natural elements (Bringslimark et al., 2009; Chen et al., 2014; Han & Hung, 2011; Nejati, Shepley et al., 2016; Raanaas et al., 2011; Shibata & Suzuki, 2004). In one of these studies Felsten (2009) investigated restorative effects of natural views of break areas on campuses. College students rated four categories of break areas such as lobbies and cafes on their potential for restoration. The categories included settings with no views of nature, with windows view of late fall time including leafless trees and some built structure, with murals of forests with colorful trees and with murals of nature scenes with water. Findings suggested that while settings with no view of nature had the lowest potential for restoration, settings with wall-sized murals offered more opportunities for recovery from attentional fatigue (Felsten, 2009).

Nejati, Shepley, Rodiek, Lee and Varni (2016) investigated restorative features of staff break areas in healthcare facilities. Greatest restorativeness was perceived at arears with direct access to private outdoor spaces such as balconies or porches in comparison with window views, artwork, or indoor plants (Nejati, Shepley et al., 2016).

3.3.5 Restorative Potential of Third Places

Studies on restorative potential of interiors are limited and mainly concerned with the impact of natural elements and outdoor views. Today most people do not have access to natural environments in a regular basis and tend to visit places such as cafes, restaurants and hangout areas when they feel psychologically fatigued. Such places are called *third places* by Oldenburgh (1989).

According to Oldenburgh (1989)(1989), third places are places that are outside home and work and they are places where people gather primarily to enjoy each other's company. Third places have some sociological benefits such as creating a sense of community. Apart from their sociological benefits, the psychological benefits they may offer are worth investigating when how much time people spend in such areas are considered.

3.4 Relationship between Preference and Restoration

Studies suggested that potential for restoration is a mediating factor for environmental preferences (Abkar et al., 2011; Hartig & Staats, 2006; Krzywicka & Byrka, 2017; Scopelliti & Vittoria Giuliani, 2004; van den Berg et al., 2003; van den Berg et al., 2007) In their study, van der Berg, Agnes, Koole et al. (2003) examined the relationship between environmental preference and restoration potential. One hundred and six participants were

randomly shown four videotapes with sound simulating different environments (natural environment with or without water; urban environment with or without water). Before watching the videos, the participants rated sub scales like depression, anger and tension on Profiles of Mood Scale (POMS) and their total happiness and stress levels. The participants then watched a video including depressing scenes as a stressor. After the video, they rated the POMS for the second time. Later, the participants viewed one of the four videotapes stated above and rated the settings on their beauty and naturalness. After completing the POMS for the third time, they were given a d2 Mental Concentration Test. Results of the study showed that, natural environments were preferred over built environments and elicit higher restorative effects. Mediation results showed that preference for the setting is mediated by the restorative potential (van den Berg et al., 2003, p. 136).

Another study that examined the relation between restorative potential between preference and restorative potential was the previously mentioned study of Lindal and Hartig in 2013. Lindal and Hartig (2013) investigated the relationship between attributes found related with preferences of streetscapes and perceived restorativeness. Results of these study showed a significant relationship between preference and restorativeness variables.

3.5 Summary of the Literature

Restoration refers to recovery from psychological fatigue due to prolonged use of mechanisms required for attention. According to Attention Restoration Theory (ART), spending time in restorative environments is helpful to recover from attention fatigue. Restorative environments have four major qualities: being away, fascination, extent and compatibility. The literature on this topic showed that natural environments have a great potential for restoration. Research on interior environments, however, are limited. Studies suggest that restorative potential is related to environmental preferences. Research show that complexity is related to preference for different types of settings including interior spaces. Based on these suggestions, this study will consider complexity as a predictor of preference and examine its effects on restorative potential of interiors.

CHAPTER IV

METHODOLOGY

In this chapter, first, main aim, research questions and hypotheses of the study will be explained. Next, instruments of the study, images and questionnaire will be mentioned in detail. Lastly the procedure the study and sample will be described.

3.1 Aim of the Study

The main aim of the present study was to examine the relationship of preference for interior spaces and their restoration potential. Therefore, this study will investigate complexity as a factor to predict the interior preferences for interiors and examine its effects on restorative potential.

3.1.1 Research Questions

1. Is preference for interior spaces related to restorative potential of the spaces?

2. Is complexity of interior spaces related to preferences?

3. Is complexity of interior spaces related to restorative potential?

4. Is the effect of complexity on preference mediated by restoration components?

3.1.2 Hypotheses

1. There is a positive correlation between preference and complexity of interiors.

2. There is a positive correlation between preference and restorative potential of interiors.

    a. There is a positive correlation between preference and components of restorative potential.

    b. There is a positive correlation between preference and being away.

    c. There is a positive correlation between preference and fascination.

    d. There is a positive correlation between preference and extent.

    e. There is a positive correlation between preference and compatibility.

3. There is a positive relation between perceived complexity of interiors and components of restorative potential.

   a. There is a positive correlation between perceived complexity and perceived restoration potential.

   b. There is a positive correlation between perceived complexity and being away.

   c. There is a positive correlation between perceived complexity and fascination.

   d. There is a positive correlation between perceived complexity and extent.

   e. There is a positive correlation between perceived complexity and compatibility.

4. Relationship between complexity and preference is mediated by components of restoration.

   c. There is a significant relationship between complexity and preference (path c).

   a. There is a significant relationship between complexity and restorative components (being away: a1; fascination: a2; extent: a3; compatibility: a4).

   b. The effect of the complexity on preference is mediated by the restorative components.

   - Restorative components (being away: b1; fascination: b2; extent: b3; compatibility: b4) predict preference.

- Complexity no longer predicts preference, or its effect is lessened (c’= not significant or <c).

3.2 Instruments

3.2.1 Images

Using photographic images as environmental substitutes was validated for in the previous studies (Shelby & Harris, 1985; Stamps, 1990; Stewart, Middleton, Downton, & Ely, 1984; Zube, Simcox, & Law, 1987). Therefore, for the present study, images of interior spaces with different complexity levels were utilized to be evaluated by respondents. Photographs were obtained from books (Farrelly, 2003; Pegler, 2000; Vercelloni, San Pietro, & Warchol, 2002) and internet (Flickr, Google Images). The images included third places such as lounges, lobbies, cafes and restaurants. These areas were especially chosen because these are the places where people can spend their time when they are not at work, school or home and they are likely to take a break in these areas when they feel tired and feel attentional fatigue during their studies. The chosen images were similar in terms of environmental qualities such as height, eye level and natural and living elements. Height and eye level of the settings were similar because they could affect the spaciousness and therefore, preference. Also, none of the images included natural elements to avoid their effect on restorative potential. None of the photos included living elements such as people as it may affect the restorative potential.

The first pool of images consisted of 76 photographs. Interior Architecture graduate students from Bilkent University were utilized to sort the images according to their complexity level. Images were categorized according to the results of the sorting process. Three complexity categories (Low, Medium, High) were created for two types of interiors (lounges / restaurant and cafes). Three images for each category (Two setting type X Three complexity levels) were chosen according to their mean scores and standard deviations. Final image pool consisted of 18 images.

All images were adjusted using Photoshop and turned into Black and White (B&W) images. Using B&W images avoid the inconsistent effect of hue color on preference and eliminate it as an independent variable (Acking & Küller, 1972; Ródenas, Sancho-Royo, & González-Bernáldez, 1975).

Figure 1. Images

3.2.2 Questionnaire

At the beginning of the questionnaire an explanation of the study and a consent form were provided. Following, some demographic questions such as age, school, department and gender were asked. With the questionnaire, respondents also recived an A5 description sheet that included a scenario and detailed descriptions of the questions (See Appendix C). Questionnaire included 18 images to be rated on eight variables on a 11 points rating scale. Variables were perceived complexity, preference, familiarity, perceived restoration potential and four restorative qualities (being away, fascination, extent, compatibility) described in Chapter 2.2.1 (See Appendix D).

One-item adapted version of the PRS (Perceived Restorativeness Scale) was used for measuring of restorative qualities. A pilot study was conducted with 20 graduate students from Bilkent University, Interior Architecture department. After the pilot study, necessary changes in the translation of the descriptions were made. Probably because of the absence of specific vocabulary used in order to describe the constructs in the scale, respondents stated that some items were not clear when translated to Turkish. Therefore, some statements were eliminated or added to the description of the questions from the definitions on the literature.

The scenario was adapted from Herzog, Maguire and Nebel's (2003) statements and was distributed to respondents as a handout, printed on A5 sheets (See Appendix D). The handout described the scenario as:

Recall one of those times when you worked hard on a project that required intense and prolonged effort. Remember how it felt. You probably reached a point where you could tell that your ability to work effectively had started to decline and that you needed a break. Put yourself in that mindset now and then please rate each of the settings you will be shown on the variables below.

Variables were asked on how much they agreed to the statements below:

Table 1 Definitions of variables as used in the questionnaire

Complexity (Kaplan & Kaplan, 1989):
"This scene is visually rich in and there is much to look at. It contains many elements of different kinds."
Familiarity:
"This scene looks familiar."
Preference:
"I like this place."
Perceived Restoration Potential (Herzog, Maguire & Nebel, (2003)
"This place helps me to take a break and restore my ability to work effectively."
Being Away (Lindal & Hartig, 2015):
"Spending time here gives me a break from my day-to-day routine and get away from the things that usually demand my attention"

Fascination (Lindal & Hartig, 2015):
“This place is fascinating; My attention is drawn to many interesting things without any effort”
Extent (Herzog, Maguire & Nebel, (2003)**:**
“This scene feels like a whole world of its own. It makes me feel like in a whole another world”
Coherence (Berto, 2005; Herzog, Maguire & Nebel, (2003)
This place helps me to feel at ease for doing what I like.

3.3 Method of the Study

3.3.1 Procedure

To eliminate the effect of screen size and tint on the visibility of the images, questionnaires were distributed to participants as hard copies. Distribution of questionnaires was done at public areas near the campuses, in person, one by one. A brief explanation about the study was done by the researcher and questionnaire were given if respondents gave permission to the study. The respondents filled out the questionnaires including the images and the definitions mentioned in the previous chapters.

3.3.2 Sample

The sample consisted of 100 college students (48 men, 52 women) from three universities (convenience sample) in Turkey. The age of the respondents ranged between 18 to 31 and the mean age was 22. Respondents were from Bilkent University (54), Hacettepe University (37), Ondokuz Mayıs University (OMU, 9).

The departments of respondents varied in Bilkent University, but it was more limited in other schools. Participants studied Nutrition and Dietetics and Health Sciences in Hacettepe; Mechanical and Civil Engineering at OMU. None of the respondents were from design or architecture related departments because educational background in these fields could affect preference, familiarity and perceived complexity results (Imamoglu, 2000).

CHAPTER V

RESULTS

In this chapter, results of the statistical analyses are presented. All statistical analyses were conducted by Statistical Package for the Social Sciences (IBM Corp. SPSS) 25. First, reliability of the scale and images were checked. Then descriptive statistics were obtained (See Appendix F, Table 1). Pearson's Correlation was conducted to check the correlations between variables. Repeated measures ANOVAs were conducted to see the effect of manipulated complexity on different variables. One-way ANOVAs were conducted to see the effect of demographic data. Lastly, a multi-linear regression analysis was conducted to see the predictor variables for preference.

4.1. Reliability Checks of the Scale and Images

Before conducting more detailed analyses, reliabilities of the scale and the images was checked. A Cronbach Alpha test was conducted to test the reliability of the restorativeness scale. Cronbach Alpha score was .94 and

none of the items increased the score significantly if deleted (See Appendix F, Table 10).

To check whether the participants perceived the complexity levels of images as intended mean values of perceived complexity were obtained and compared with the three levels of complexity created before. A repeated measures ANOVA was conducted to see whether the difference between perceived complexity levels were significant. There was a significant effect of the manipulated complexity levels on the perceived complexity levels of the images [Wilks Lambda'=.24, F=156.135, p<.001, partial eta squared= .761]. The results showed that respondents perceived images in High complexity category (Mean= 5.99 SD=1.27) more complex than Medium category (Mean=3.97 SD=1.56) and Medium category more complex than Low category (Mean=2.92 SD=1.27) (See Appendix F, Table 2).

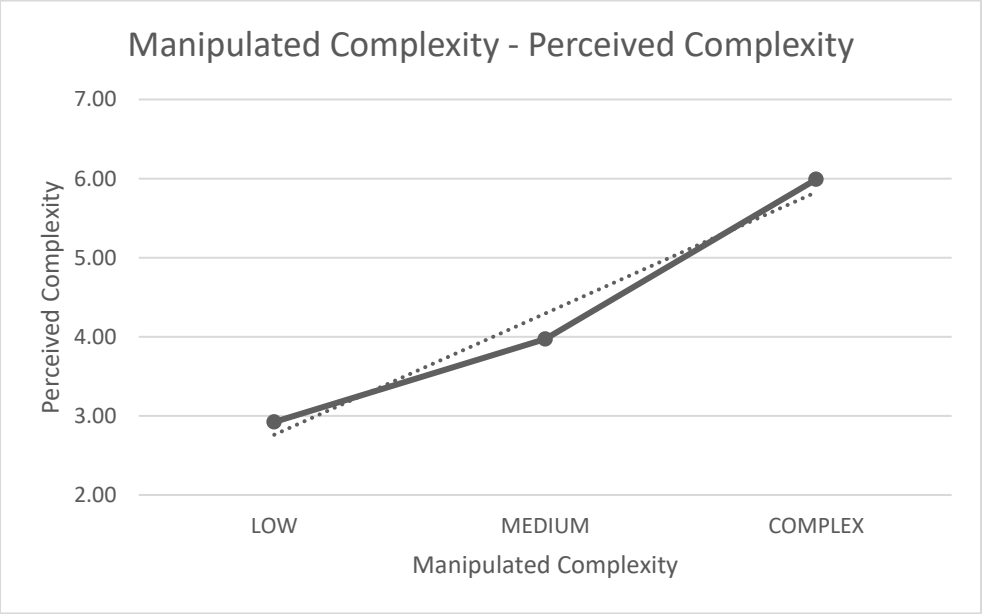

Figure 2. Perceived Complexity – Manipulated complexity mean graph

4.2 Relationship Between Perceived Complexity and Preference

Pearson's correlation was conducted in order to assess the relationship between perceived complexity and preference. Correlation results showed a positive relationship (P=.30, p=.003) between preference and perceived complexity at 0.05 significance level (See Appendix F, Table 4).

Table 2

Correlations Between Variables

Measures	1	2	3	4	5	6	7	8
1. Complexity	1							
2. Familiarity	.47**	1						
3. Preference	.30**	.59**	1					
4. PRP	0.17	.43**	.82**	1				
5. Being Away	0.18	.47**	.85**	.85**	1			
6. Fascination	.24*	.46**	.85**	.83**	.86**	1		
7. Extent	.25*	.53**	.77**	.62**	.65**	.61**	1	
8. Compatibility	.22*	.49**	.87**	.75**	.79**	.79**	.77**	1
9. Age	.25*	-.04	-.17	-.23*	-.18	-.19	-0.10	-0.16

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

To explore the relationship between preference and the manipulated complexity, Pearson correlation and repeated measures ANOVA were conducted. A repeated measures ANOVA was conducted to see whether the preference rating differed according to manipulated complexity levels (low, medium, high). According to the ANOVA results, there was a significant effect of the manipulated complexity levels on the preference levels of the

images [Wilks Lambda'=.76, F=15.34, p<.001, partial eta squared= .238] at 0.05 significance level. The results showed that respondents preferred images in High complexity category (Mean= 5.49 SD=1.49) more than Medium complexity category (Mean=4.69 SD=1.19) and Low complexity category (Mean=4.64 SD=1.52). There was no significant difference between Simple and Moderate categories at 0.05 significance level (See Appendix F, Table 3).

4.3 Relationship Between Preference and Restoration

Pearson's correlation results showed a significant positive strong relationship (P=.82, p<.001) between preference and perceived restoration potential at 0.05 significance level. All four components of restoration also had a significant positive relationship with preference. Preference and Being Away had a positive very strong relationship (P=.85, p<.001) at 0.05 significance level. Preference and Fascination had a positive relationship (P=.85, p<.001) at 0.05 significance level. Extent and preference had a positive relationship (P=.77, p<.001) at 0.05 significance level. Compatibility and preference positive relationship (P=.87, p<.001) at 0.05 significance level (See Appendix F, Tables 4).

4.4 Relationship Between Complexity and Restoration

Repeated measures ANOVA was conducted to see if the perceived restorative potential ratings differed according to manipulated complexity levels (low, medium, high). According to the ANOVA results, there was no

significant effect of the manipulated complexity levels on the PRP levels of the images [Wilks Lambda'=.98, F=1.03, p=0.2, partial eta squared= 3.64] at 0.05 significance level (See Appendix F, Table 5).

Pearson's correlation results also showed no significant relationship between PRP and complexity. Relationship of complexity with Being Away was also not significant at 0.05 significance level. Complexity and Fascination had a positive relationship (P=.24, p=.017) at 0.05 significance level. Complexity had positive weak relationship with Extent (P=.22, p=.029) and Compatibility (P=.25, p=.012) at 0.05 significance level (See Appendix F, Table 4).

4.5 Relationship Between Restoration Components and Perceived Restoration Potential

A Pearson's correlation was conducted to examine the relationship between restoration components and perceived restoration potential. Results showed no significant relationship between PRP and Being Away at 0.05 significance level. PRP had positive weak relationships with Fascination (P=.24, p=.017), Extent (P=.22, p=.029) and Compatibility (P=.25, p=.012) at 0.05 significance level (See Appendix F, Tables 4).

4.6 Relationship Between Familiarity, Preference and Complexity

Pearson correlation results showed a positive moderate relationship between Complexity and Familiarity (P=.47, p=0.02) and positive moderate

relationship between Familiarity and Preference (P=.59, p=0.02) at 0.05 significance level (See Appendix F, Table 4).

Repeated measures ANOVA was conducted to see if familiarity ratings differed according to manipulated complexity levels (low, medium, high). According to the ANOVA results, there was a significant effect of the manipulated complexity levels on the familiarity of the images [Wilks Lambda'=.62, F=30.09, p<.001, partial eta squared= .38] at 0.05 significance level (See Appendix F, Table 5). The results showed that respondents rated images in "Medium" (Mean=5.59 SD=1.33) complexity category as the most familiar while "Low" (Mean=4.65 SD=1.46) and "High" (Mean=4.99 SD=1.60) were significantly less familiar (See Figure 2).

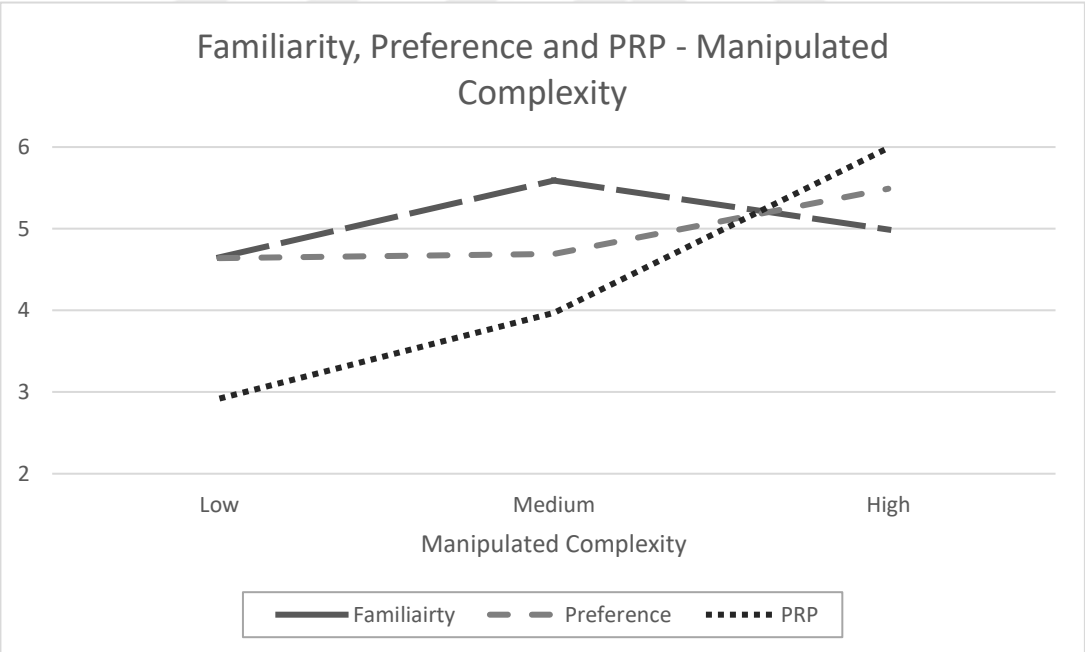

Figure 3. Familiarity, Preference, PRP – Manipulated complexity mean graph

4.8 Mediation Analysis

To examine whether restoration components mediated the relationship between preference and complexity, it was hypothesized that complexity as a predictor of visual preference, influence the perception of restorative components which in turn influence preference for interior spaces.

Baron and Kenny's (1986) model was used in this study to examine the mediation effect. Their model requires the following conditions to be satisfied for a mediation model to be valid:

(X: predictor, Y: dependent, M: mediator)

1. X predicts Y (path c)
2. X predicts M (path a)
3. X and M together predict Y
    a. M predicts Y (path b)
    b. X no longer predicts Y or lessened (path c') with introduction of mediators

Therefore, the following hypotheses were studied to check the mediating effects of restorative components on the association between complexity and preference using Baron and Kenny's (1986) procedure:

• H4c: There is a significant relationship between complexity and preference (path c).

• H4a: There is a significant relationship between complexity and restorative components (being away: a1; fascination: a2; extent: a3; compatibility: a4).

- H4b: The effect of the complexity on preference is mediated by the restorative components.
    - Restorative components (being away: b1; fascination: b2; extent: b3; compatibility: b4) predicts preference.
    - Complexity no longer predicts preference, or its effect is lessened (c'= not significant or <c).

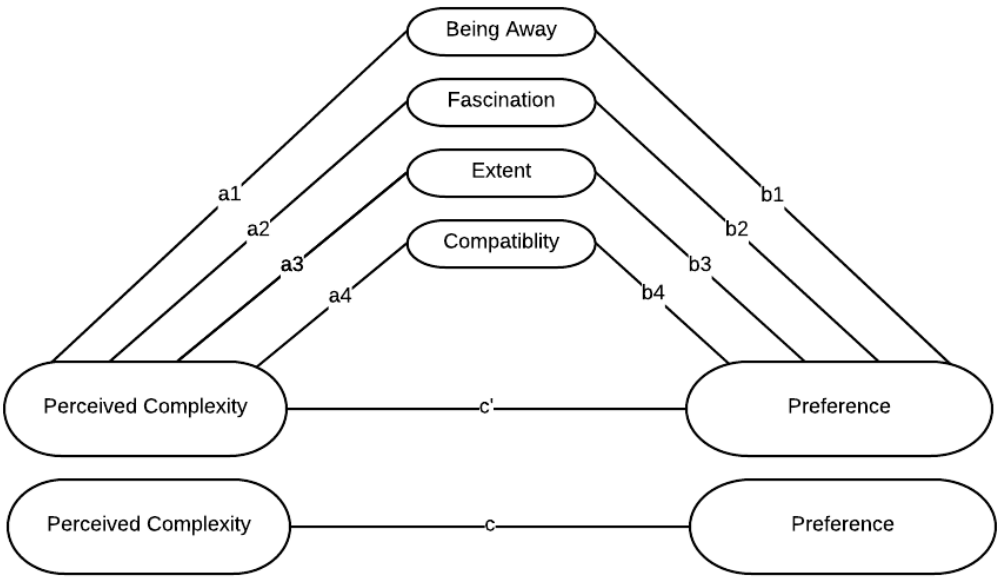

Figure 4 Mediation model: Perceived Complexity as predictor of Preference and restoration components as mediators

Path analysis using The PROCESS macro for SPSS by Andrew F. Hayes was conducted to examine the direct and indirect relationships among complexity, restorative components and preference (See Appendix F Table 11).

First, to check the path c, the total effect of complexity on preference, a regression analysis was conducted where complexity was the predictor of preference. Results showed that complexity as a predictor of preference accounted for 8.7% of the variance in preference (F (1, 98) = 9.318, p =0.003). Therefore, the findings supported Hypothesis 4c (See Table 3).

Table 3 Regression analysis: preference as dependent, complexity as independent

R^2=.087	coeff	se	t	p	LLCI	ULCI
constant	3.66	.432	8.47	.0000	2.8023	4.5181
complexity	.30	.098	3.05	.0029	.1041	.4909

Then, four regression analyses were performed with each of restorative components as the dependent variable and complexity as predictor variable to test Hypothesis 4a. Complexity was significant in explaining each of the restorative components except for Being Away (See Table 4). Therefore, Hypotheses 4a1 was rejected, while 4a2, 4a3 and 4a4 was not rejected.

Table 4 Regression analyses: complexity as predictor and restoration components as dependent

	coeff	p	F	R	R^2
being away	.20	.79	3.145	.18	.31
fascination	.29	.02	5.930	.24	.06
extent	.29	.01	6.508	.25	.06
compatibility	.26	.03	4.906	.22	.05

Finally, another regression analysis was performed with both complexity and restorative components as predictors and preference as dependent variable. The independent variables explained 87% variance of preference ($F(1,94) = 122.16$, $p < 0.001$). All restorative components (Being Away, Fascination, Compatibility) were positive predictors of preference. Therefore, Hypotheses 4b1, 4b2, 4b3 and 4b4 was not rejected. However, complexity was not significant in explaining preference anymore. Therefore, Hypothesis 4c' was also not rejected (See Table 5).

Table 5 Multiple regression analysis of complexity and restoration components on preference.

$R^{2:}$= .87	**coeff**	**se**	**t**	**p**	**LLCI**	**ULCI**
constant	.67	.22	3.01	.003	.230	1.118
complexity	.07	.04	1.83	.071	-.006	.152
Being away	.21	.07	3.01	.003	.070	.344
fascination	.23	.07	3.43	.000	.096	.360
extent	.19	.05	3.58	.000	.084	.292
compatibility	.24	.07	3.66	.000	.111	.375

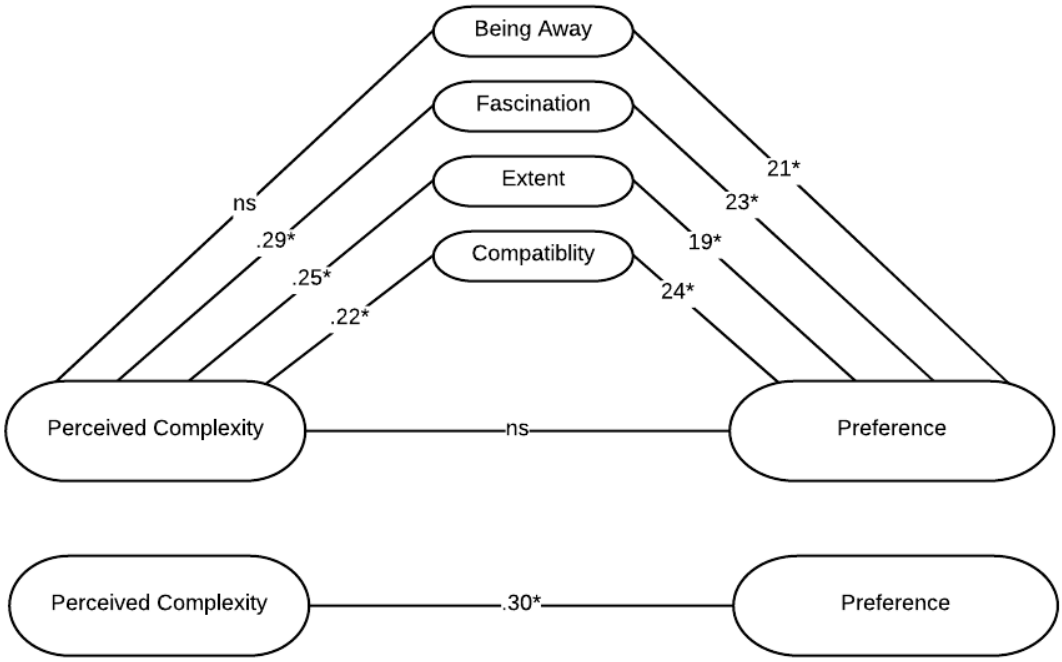

Figure 4 Results of the mediation model

The results showed that the mediating conditions set by Baron and Kenny (1986) were satisfied except for Being Away (See Figure 4). Specifically, complexity had a positive effect on preference (path c). Complexity had a positive effect on restorative components except for Being Away (path a). Lastly effect of complexity on preference became insignificant with the introduction of restorative components. The change in the F value also showed that model was improved when all variables entered to equation. Therefore, it can be concluded that the association of complexity with preference is mediated by fascination, extent and compatibility.

4.9 Effects of Demographic Data

One-way ANOVA tests were conducted to compare the effects of gender, faculty and school. ANOVA results showed no significant difference in variables except for compatibility and being away in schools. An analysis of variance showed that the effect of faculty on being away (F (2,97) = 3.97, p = 0.22 F) and compatibility (F (2,97) = 5.29, p = 0.07) was significant (See Appendix F, Table 7).

Students from OMÜ gave lower ratings on Being Away and Compatibility. There were no significant differences between the means results for variables effected by faculties (See Appendix F, Table 8). According to ANOVA results gender only created a difference in familiarity results (F (4,98) = 4.05, p = 0.05) (See Appendix F, Table 9).

Pearson's correlation results were examined in order to assess the effect of age on other variables. According to the correlation results perceived complexity and age had a positive relationship (P=.25, p=.01). Results also showed a negative relationship between age and perceived restoration potential (P=-0.29, p=-0.02) significant at 0.05 level (See Appendix F, Table 4)

CHAPTER VI

DISCUSSION

Restorative benefits of natural settings are revealed in many studies in the literature. However, studies on the restorative potential of other spaces, especially interiors, are generally limited to natural elements and environments. Especially in big cities, not everyone has an opportunity to visit natural environments as a daily routine. People tend to spend their leisure time at third places such as restaurants, cafés and lounges. Those places may offer opportunities for restoration if they are designed accordingly. Therefore, in the current study we tried to examine the factors that can increase the restorative potential of interior spaces. Based on the suggestion regarding the relationship between preference and restorative potential, we considered complexity as a predictor of preference and investigated its effects on restorative potential.

For the evaluation of Hypothesis I, “There is a significant relationship between preference and perceived complexity”, Pearson correlations and repeated measure ANOVAs were conducted. Studies on the relationship between perceived complexity and preference suggests different findings. While some of them suggested an inverted U shape relationship (Berlyne, 1971; Farley & Weinstock, 1980; Güçlütürk et al., 2016; Imamoglu, 2000; Saklofske, 1975; Vitz, 1966), some suggested a positive linear relationship (Willis & Dornbush, 1968; Wohlwill, 1976). In the present study, results showed a positive linear relationship between complexity and preference. This result supports Scott’s (1993b, 1993a) findings suggesting complexity as one of the predictors of preferences for interiors. However, Scott found a stronger correlation between complexity and preference. Hartig and Lindal’s (2013) study on streetscapes also suggests very similar weak and positive correlation between complexity and preference. When further investigated, ANOVA results shows “High” complexity images had significantly higher preference ratings while there was no significant difference between Low and Medium complexity image categories.

Although no studies have been done for interiors, the relationship between preference towards environments and restorative potential of the interiors have been suggested by researchers in the previous studies (Hartig & Staats, 2006; Hartig & Korpela, 1996; Lindal & Hartig, 2013; van den Berg et al., 2003). In the current study, correlation and ANOVA results show a significant effect of both perceived and predefined complexity on preference. Regression analysis supported the results about restorative components

(being away, fascination, extent and compatibility) being predictors of preference besides fascination. Therefore, none of the components of Hypothesis 2 “There is a positive relation between preference and restorative potential of interiors (PRP, being away, fascination, extent, compatibility)” was rejected. Results of this study support the previous findings and suggest that restorative potential may be related to the preference of interior spaces. Based on this, further studies may be done to investigate the factors that can contribute to the psychological benefits of interiors. Designing interiors may not be only about aesthetical satisfaction and it can also be a tool for increasing the psychological well-being of people. It is not true to compare or claim that interior spaces can substitute the benefits of natural environment. Nevertheless, considering many people spend most of their lives indoors and do not have the opportunity to expose themselves to nature regularly, evidence-based and responsible designing can benefit people especially in public places such as schools, hospitals and workplaces.

Although not strong, result of the study also show a positive relationship between complexity and some restoration components (fascination, extent and compatibility). Hypotheses 3a (PRP) and 3b (Being Away) were not supported, while Hypotheses 3c, 3d and 3e are supported. This means, complexity may increase the restorative potential of interior spaces by fascination, a sense of extent and compatibility. Lindal and Hartig (2013) examined the relationship of streetscape complexity with being away and fascination and found a positive correlation with all of them. Similarly,

fascination was found to be positively correlated with complexity in the present study while being away was not significantly correlated. The reason why being away was not found to be related with complexity may be that high number of visual stimuli in complex environments may be a setback for creating a sense of escape within that environment. The harder an environment is to comprehend; the more effort people would put into and get involved in the scene. Factors that affect the complexity of interiors are more varied compared to other setting and these factors can create different outcomes. Therefore, not all factors of complexity may be related with being away. For further studies, more controlled images may be chosen in order to understand which aspects of complexity mentioned in Scott's (1993b) study may be related to the restoration. With a larger sample and greater number of images, effects of factors such as spatial configurations; configuration of elements; quantity and variety architectural elements, furnishing, accessories and finishing, can be explored.

Considering the literature that support effects of familiarity on preference and complexity, it was also evaluated by the respondents. Pearson's correlation results showed a positive relationship between familiarity and perceived complexity. This findings supports the previous studies suggesting that familiar environments may be perceived less complex because they are more predictable environments and easier to process (Imamoglu, 2000; Wickelgren, 1979; Zajonc, 1968). Familiarity was also positively correlated with preference. This finding is consistent with previous studies that suggest

a positive relationship between familiarity and preference (Cantor, 1968; Cantor & Kubose, 1969; Faw & Nunnally, 1971; Lemond et al., 1974).

Because the meaning of the statements may tend to get lost while translating the PRP scale to Turkish, we combined different statements from the scale for some constructs and used different word choices for the titles of the constructs according to the feedback that was given at the pilot study. High results in Cronbach Alpha test showed that the scale was reliable. Furthermore, results of the study were generally consistent with the literature. Therefore, it can be assumed that the constructs were comprehended as intended.

One of the other concerns was whether the respondents would perceive images similarly to the experts in terms of complexity. However, ANOVA results showed that there were significant changes of perceived complexity means amongst the predefined complexity categories. Therefore, it can be concluded that respondents perceived the complexity of the photos as intended.

A possible limitation of the present study may be using single-item measures for variables such as preference and restoration components. The reason for using single-item measures was to avoid exhausting the respondents and showing more images as possible. Studies show that single-item measures are not inferior to multi-item measures (Gardner, Cummings, Dunham, &

Pierce, 2016). Complexity, preference and restoration have been measured as single-items in many studies before (Abdulkarim & Nasar, 2014; Hartig & Staats, 2006; Kaplan, Kaplan, & Wendt, 1972; Lindal & Hartig, 2013; Staats, Kieviet, & Hartig, 2003). Also, as mentioned before, single-item measures in the present study showed high reliability and results of the study were consistent with the literature.

Another possible limitation might be usage of two-dimensional images for representing the settings. Many studies supported validity of two-dimensional images for evaluation of environments (Shelby & Harris, 1985; Stamps, 1990; Stewart et al., 1984; Zube et al., 1987). Stamps (1990) compared on-site environmental evaluation with evaluations of photographs and found a high correlation between them. Many studies about restoration used images for evaluation (Abdulkarim & Nasar, 2014; Hartig & Korpela, 1996; Lindal & Hartig, 2013).

Unlike other environments, such as natural or urban spaces, interiors can be generally associated with motives and goals. In order to eliminate this effect, we tried to select third places such as cafes and lounges and gave respondents a scenario to imagine themselves in. However, in further studies qualitative analysis may be done to understand whether such factors are affecting the results. Respondents may be asked which kind of activities they are associating the given environments with to see whether such affordances are interfering with results.

To sum up, findings of the present study mostly agree with the literature. Additionally, results suggest that other factors than natural elements can increase the restoration potential of interior spaces. The knowledge on this topic should be widened and utilized to guide our designs for spaces people tend to escape to when they feel fatigued. Designing third places such as cafes and restaurants, lounges and recess areas in buildings where people are prone to attentional fatigue (such as schools or stressful workplaces such as hospitals) based on this knowledge may help us to use design as a tool for increasing well-being. After conducting more detailed research on specific factors that affect complexity and their relationship with restoration, this knowledge can guide the designs of third places to provide people with restorative places they can access. Break areas at workplaces, recess areas at schools and public areas around cities can be designed based on this knowledge. Creating more complex third places by using variety of materials, spatial arrangements, lighting features may create more fascinating environments, that can also create a sense of extent and compatibility if designed responsibly. These factors should be studied more in detail and the fact that ever design decision has a psychological effect on users should be kept in mind.

CHAPTER VII

CONCLUSION

Restoration means recovery from attentional fatigue caused by overuse of attention mechanisms. Restorative environments help to recover from attentional fatigue and have four general qualities; being away, fascination, extent and compatibility (Kaplan, 1995). Research suggested a correlation between preference and restoration (van den Berg et al., 2003). Restoration potential of natural settings and elements are explained in literature, however, studies on interiors are very limited.

To assess the qualities of interior settings that can promote restoration, in this study, complexity was used as a predictor of preference. Images of third places with different complexity levels were evaluated by college students for preference, familiarity, perceived restoration potential and components of restoration, being away, fascination, extent and compatibility. Results of the present study supported the previous studies that

suggest a strong positive correlation between preference and restoration. Complexity and preference were correlated. Complexity and some restoration components (fascination, extent, compatibility) were also correlated.

In conclusion, results of the study showed that there may be some factors that can increase the restorative potential of interiors in third places. Since not many people have regular contacts with nature in modern cities, increasing restorative potential of third places, schools and workplaces can benefit people's psychological well-being. Therefore, more comprehensive research should be conducted on the topic and must guide designing of spaces people are exposed daily.

REFERENCES

Abdulkarim, D., & Nasar, J. L. (2014). Are livable elements also restorative? *Journal of Environmental Psychology*, *38*, 29–38. https://doi.org/10.1016/j.jenvp.2013.12.003

Abkar, M., Mustafa Kamal, M. S., Maulan, S., Mariapan, M., & Davoodi, S. R. (2011). Relationship between the preference and perceived restorative potential of urban landscapes. *HortTechnology*, *21*(5), 514–519.

Acking, C. A., & Küller, R. (1972). The perception of an interior as a function of its colour. *Ergonomics*, *15*(6), 645–654. https://doi.org/10.1080/00140137208924465

Altaher, Y., & Runnerstrom, M. G. (2018). Psychological restoration practices among college students. *Journal of College Student Development*, *59*(2), 227–232. https://doi.org/10.1353/csd.2018.0019

Bagot, K. L., Allen, F. C., & Toukhsati, S. (2015). Perceived restorativeness of children's school playground environments: Nature, playground features and play period experiences. *Journal of Environmental Psychology*, *41*, 1–9. https://doi.org/10.1016/j.jenvp.2014.11.005

Bargh, J. A., & Chartrand, T. L. (1999). The unbearable automaticity of being. *American Psychologist*, *54*(7), 462–479. https://doi.org/10.1037/0003-066X.54.7.462

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173–1182. https://doi.org/10.1037/0022-3514.51.6.1173

Bengtsson, A., & Grahn, P. (2014). Outdoor environments in healthcare settings: A quality evaluation tool for use in designing healthcare gardens. *Urban Forestry & Urban Greening*, *13*(4), 878–891. https://doi.org/10.1016/j.ufug.2014.09.007

Berlyne, D. E. (1970). Novelty, complexity, and hedonic value. *Perception & Psychophysics*, *8*(5), 279–286. https://doi.org/10.3758/BF03212593

Berlyne, D. E. (1971). *Aesthetics and psychobiology*. *The Century psychology series*. New York: Appleton-Century-Crofts.

Berlyne, D. E., & Peckham, S. (1966). The semantic differential and other measures of reaction to visual complexity. *Canadian Journal of Psychology/Revue Canadienne De Psychologie*, *20*(2), 125–135.

Berto, R. (2005). Exposure to restorative environments helps restore attentional capacity. *Journal of Environmental Psychology*, *25*(3), 249–259. https://doi.org/10.1016/j.jenvp.2005.07.001

Bodin, M., & Hartig, T. (2003). Does the outdoor environment matter for psychological restoration gained through running? *PSYCHOLOGY of SPORT and EXERCISE*, *4*(2), 141–153. https://doi.org/10.1016/S1469-0292(01)00038-3

Bringslimark, T., Hartig, T., & Patil, G. G. (2009). The psychological benefits of indoor plants: A critical review of the experimental literature. *Journal of Environmental Psychology*, *29*(4), 422–433. https://doi.org/10.1016/j.jenvp.2009.05.001

Bristow, A. L., Chau, C. K., Horoshenkov, K. V., & Choy, Y. S. (2013). Assessing and valuing restorative space on campus: A comparison between the UK and Hong Kong. In *42nd International Congress and*

Exposition on Noise Control Engineering 2013, INTER-NOISE 2013: Noise Control for Quality of Life (pp. 4871–4877).

Calogiuri, G., Evensen, K., Weydahl, A., Andersson, K., Patil, G., Ihlebæk, C., & Raanaas, R. K. (2016). Green exercise as a workplace intervention to reduce job stress. Results from a pilot study. *Work*, *53*(1), 99–111. https://doi.org/10.3233/WOR-152219

Cantor, G. N. (1968). Children's “like-dislike” ratings of familiarized and nonfamiliarized visual stimuli. *Journal of Experimental Child Psychology*, *6*(4), 651–657. https://doi.org/10.1016/0022-0965(68)90109-4

Cantor, G. N., & Kubose, S. K. (1969). Preschool children's ratings of familiarized and nonfamiliarized visual stimuli. *Journal of Experimental Child Psychology*, *8*(1), 74–81. https://doi.org/10.1016/0022-0965(69)90029-0

Chawla, L., Keena, K., Pevec, I., & Stanley, E. (2014). Green schoolyards as havens from stress and resources for resilience in childhood and adolescence. *HEALTH & PLACE*, *28*, 1–13. https://doi.org/10.1016/j.healthplace.2014.03.001

Chen, H. C., Wang, C. H., Chen, K. S., & Chang, T. L. (2014). Analysis and construction of stress relief model for healthy indoor environments. *Quality and Quantity*, *48*(4), 2053–2067. https://doi.org/10.1007/s11135-013-9879-4

Cole, D. N., & Hall, T. E. (2010). Experiencing the Restorative Components of Wilderness Environments: Does Congestion Interfere and Does Length of Exposure Matter? *Environment and Behavior*, *42*(6), 806–823. https://doi.org/10.1177/0013916509347248

Corbetta, M., & Shulman, G. L. (2002). Control of goal-directed and stimulus-driven attention in the brain. *Nature Reviews. Neuroscience*, *3*(3), 201–215. https://doi.org/10.1038/nrn755

Cupchik, G. C. (1986). A decade after Berlyne. *Poetics*, *15*(4-6), 345–369. https://doi.org/10.1016/0304-422X(86)90003-3

Dosen, A., & Ostwald, M. (Eds.) 2015. *Measuring the impact of openness, enclosure, mystery and complexity: a meta-analysis of the results.*

Farley, F. H., & Weinstock, C. A. (1980). Experimental aesthetics: Children's complexity preference in original art and photoreproductions. *Bulletin of the Psychonomic Society*, *15*(3), 194–196. https://doi.org/10.3758/BF03334506

Farrelly, L. (2003). *Bar and restaurant interior structures*. Chichester: Wiley-Academy.

Faw, T. T., & Nunnally, J. C. (1971). The influence of stimulus incongruity on the familiarity effect in visual selection. *Perception & Psychophysics*, *9*(2), 150–154. https://doi.org/10.3758/BF03212618

Fechner, G. T. (1876). *Vorschule der Ästhetik*. Hamburg: Tradition.

Felsten, G. (2009). Where to take a study break on the college campus: An attention restoration theory perspective. *Journal of Environmental Psychology*, *29*(1), 160–167. https://doi.org/10.1016/j.jenvp.2008.11.006

Gardner, D. G., Cummings, L. L., Dunham, R. B., & Pierce, J. L. (2016). Single-Item Versus Multiple-Item Measurement Scales: An Empirical Comparison. *Educational and Psychological Measurement*, *58*(6), 898–915. https://doi.org/10.1177/0013164498058006003

Gilchrist, K., Brown, C., & Montarzino, A. (2015). Workplace settings and wellbeing: Greenspace use and views contribute to employee wellbeing at peri-urban business sites. *Landscape and Urban Planning*, *138*, 32–40. https://doi.org/10.1016/j.landurbplan.2015.02.004

Güçlütürk, Y., Jacobs, R. H. A. H., & van Lier, R. (2016). Liking versus Complexity: Decomposing the Inverted U-curve. *Frontiers in Human Neuroscience*, *10*, 112. https://doi.org/10.3389/fnhum.2016.00112

Gulwadi, G. B. (2006). Seeking restorative experiences: Elementary school teachers' choices for places that enable coping with stress. *Environment and Behavior*, *38*(4), 503–520. https://doi.org/10.1177/0013916505283420

Ham, T. Y., & Guerin, D. a. (2004). A Cross-Cultural Comparison of Preference For Visual Attributes in Interior Environments: America and China. *Journal of Interior Design*, *30*(1), 37–50. https://doi.org/10.1111/j.1939-1668.2004.tb00398.x

Han, K. T., & Hung, C. Y. (2011). Influences of plants and their visibility, distance, and surrogate in a classroom on students' psycho-physiology. *Journal of Architecture and Planning*, *12*(1), 1–22.

Hartig, T., Böök, A., Garvill, J., Olsson, T., & Gärling, T. (1996). Environmental influences on psychological restoration. *Scandinavian Journal of Psychology*, *37*(4), 378–393. https://doi.org/10.1111/j.1467-9450.1996.tb00670.x

Hartig, T., Evans, G. W., Jamner, L. D., Davis, D. S., & Gärling, T. (2003). Tracking restoration in natural and urban field settings. *Journal of Environmental Psychology*, *23*(2), 109–123. https://doi.org/10.1016/S0272-4944(02)00109-3

Hartig, T., Evans, G. W., & Mang, M. (1991). Restorative effects of natural environment experiences. *Environment and Behavior*, *23*(1), 3–26. https://doi.org/10.1177/0013916591231001

Hartig, T., Kaiser, F. G., & Bowler, P. a. (1997). Further development of a measure of perceived environmental restorativeness. *Uppsala University Uppsala Working Paper*. (5).

Hartig, T., & Korpela, K. (1996). Restorative qualities of favorite places. *Journal of Environmental Psychology*, *16*(3), 221–233. https://doi.org/10.1006/jevp.1996.0018

Hartig, T., Korpela, K., Evans, G. W., & Gärling, T. (1997). A measure of restorative quality in environments. *Scandinavian Housing and Planning Research*, *14 VN - r*(Journal Article), 175–194. https://doi.org/10.1080/02815739708730435

Hartig, T., & Staats, H. (2006). The need for psychological restoration as a determinant of environmental preferences. *Journal of Environmental Psychology*, *26*(3), 215–226. https://doi.org/10.1016/j.jenvp.2006.07.007

Herzog, T. R., Black, A. M., Fountaine, K. A., Knotts, D. J., & Herzog. (1997). Reflection and attentional recovery as distinctive benefits of restorative environments. *Journal of Environmental Psychology*, *17*, 165–170. https://doi.org/10.1006/jevp.1997.0051

Herzog, T. R., Maguire, C. P., & Nebel, M. B. (2003). Assessing the restorative components of environments. *Journal of Environmental Psychology*, *23*(2), 159–170. https://doi.org/10.1016/S0272-4944(02)00113-5

Heylighen, F., Bollen, J., & Riegler, A. (1999). *The evolution of complexity*. *Einstein meets Magritte: v. 8*. Dordrecht, London: Springer.

Hildebrand, G. (1999). *Origins of architectural pleasure*. Berkeley: University of California Press.

Hipp, J. A., Gulwadi, G. B., Alves, S., & Sequeira, S. (2015). The Relationship Between Perceived Greenness and Perceived Restorativeness of University Campuses and Student-Reported Quality of Life. *Environment and Behavior*. (AUGUST), 0013916515598200--0013916515598200-. https://doi.org/10.1177/0013916515598200

Hogeboom, M., & van Leeuwen, C. (1997). Visual search strategy and perceptual organization covary with individual preference and structural complexity. *Acta Psychologica*, *95*(2), 141–164. https://doi.org/10.1016/S0001-6918(96)00049-2

Imamoglu, C. (2000). Complexity, Liking and Familiarity: Architecture And Non-Architecture Turkish Students' Assessments Of Traditional And Modern House Facades. *Journal of Environmental Psychology*, *20*(1), 5–16. https://doi.org/10.1006/jevp.1999.0155

Jahncke, H., Eriksson, K., & Naula, S. (2012). Shall we silence cities and workplaces? The effects of auditive and visual stimuli on perceived restoration likelihood. In *41st International Congress and Exposition on Noise Control Engineering 2012, INTER-NOISE 2012* (pp. 3940–3951).

Jahncke, H., Eriksson, K., & Naula, S. (2015). The effects of auditive and visual settings on perceived restoration likelihood. *Noise and Health*, *17*(74), 1–10. https://doi.org/10.4103/1463-1741.149559

James, W. (1892). Attention. In W. James (Ed.), *Psychology: Briefer course* (pp. 217–238). London: Macmillan and Co. https://doi.org/10.1037/11630-013

Jones, J. K., Farley, H., & Murphy, A. (2017). Virtual worlds as restorative environments. In *Authentic Virtual World Education: Facilitating Cultural Engagement and Creativity* (pp. 45–59). https://doi.org/10.1007/978-981-10-6382-4_4

Joye, Y., & van der Berg, A. E. (2012). Restorative environments. In L. Steg, A. E. van den Berg, & de Groot, Judith I. M. (Eds.), *Environmental Psychology: An Introduction* (pp. 58–66). Wiley-Blackwell.

Kaplan, R., & Kaplan, S. (1989). The Experience of Nature: A Psychological Perspective. *Cambridge University Press*, 6. https://doi.org/10.1037/030621

Kaplan, S., & Talbot, J. F. (1983). Psychological Benefits of A Wilderness Experience. In I. Altman & J. F. Wohlwill (Eds.), *Human Behavior and Environment: Vol. 6. Behavior and the Natural Environment.* Boston, MA: Springer US.

Kaplan, S. (1983). A model of Person-Environment compatibility. *Environment and Behavior*, *15*(3), 311–332. https://doi.org/10.1177/0013916583153003

Kaplan, S. (1995). The restorative benefits of nature: Toward an integrative framework. *Journal of Environmental Psychology*, *15*(3), 169–182. https://doi.org/10.1016/0272-4944(95)90001-2

Kaplan, S. (2016). Meditation, Restoration, and the Management of Mental Fatigue. *Environment and Behavior*, *33*(4), 480–506. https://doi.org/10.1177/00139160121973106

Kaplan, S., Bardwell, L. V., & Slakter, D. B. (1993). [Copy] The Museum as a Restorative Environment. *Environment and Behavior*, *25*(6), 725–742. https://doi.org/10.1177/0013916593256004

Kaplan, S., & Berman, M. G. (2010). Directed Attention as a Common Resource for Executive Functioning and Self-Regulation. *Perspectives on Psychological Science : a Journal of the Association for Psychological Science*, *5*(1), 43–57. https://doi.org/10.1177/1745691609356784

Kaplan, S., & Kaplan, R. (1982). *Cognition and environment: Functioning in an uncertain world / Stephen Kaplan and Rachel Kaplan*. New York: Praeger.

Kaplan, S., Kaplan, R., & Wendt, J. S. (1972). Rated preference and complexity for natural and urban visual material. *Perception & Psychophysics*, *12*(4), 354–356. https://doi.org/10.3758/BF03207221

Karmanov, D., & Hamel, R. (2008). Assessing the restorative potential of contemporary urban environment(s): Beyond the nature versus urban dichotomy. *Landscape and Urban Planning*, *86*(2), 115–125. https://doi.org/10.1016/j.landurbplan.2008.01.004

Korpela, K., & Kinnunen, U. (2011). How is leisure time interacting with nature related to the need for recovery fromwork demands? Testing multiple mediators. *Leisure Sciences*, *33*(1), 1–14. https://doi.org/10.1080/01490400.2011.533103

Krzywicka, P., & Byrka, K. (2017). Restorative qualities of and preference for natural and urban soundscapes. *Frontiers in Psychology*, *8*(OCT).

Kuper, R. (2017). Restorative potential, fascination, and extent for designed digital landscape models. *Urban Forestry and Urban Greening*, *28*, 118–130. https://doi.org/10.1016/j.ufug.2017.10.002

Lafortezza, R., Carrus, G., Sanesi, G., & Davies, C. (2009). Benefits and well-being perceived by people visiting green spaces in periods of heat stress. *Urban Forestry and Urban Greening*, *8*(2), 97–108. https://doi.org/10.1016/j.ufug.2009.02.003

Lee, K. E., Williams, K. J.H., Sargent, L. D., Williams, N. S.G., & Johnson, K. A. (2015). 40-second green roof views sustain attention: The role of micro-breaks in attention restoration. *Journal of Environmental Psychology*, *42*, 182–189. https://doi.org/10.1016/j.jenvp.2015.04.003

Lemond, L. C., Durham, R. L., Slater, G. P., Wilson, W. H., & Nunnally, J. C. (1974). Varying degrees of complexity and isolation in visual exploration. *Perceptual and Motor Skills*, *38*(3), 787–794. https://doi.org/10.2466/pms.1974.38.3.787

Lindal, P. J., & Hartig, T. (2013). Architectural variation, building height, and the restorative quality of urban residential streetscapes. *Journal of Environmental Psychology*, *33*, 26–36. https://doi.org/10.1016/j.jenvp.2012.09.003

Lindal, P. J., & Hartig, T. (2015). Effects of urban street vegetation on judgments of restoration likelihood. *Urban Forestry and Urban Greening*, *14*(2), 200–209. https://doi.org/10.1016/j.ufug.2015.02.001

Loder, A. (2014). ‘There's a meadow outside my workplace’: A phenomenological exploration of aesthetics and green roofs in Chicago and Toronto. *Landscape and Urban Planning*, *126*, 94–106. https://doi.org/10.1016/j.landurbplan.2014.01.008

Mangone, G., Capaldi, C. A., van Allen, Z. M., & Luscuere, P. G. (2017). Bringing nature to work: Preferences and perceptions of constructed indoor and natural outdoor workspaces. *Urban Forestry and Urban Greening*, *23*, 1–12. https://doi.org/10.1016/j.ufug.2017.02.009

Mayer, F. S., Frantz, C. M., Bruehlman-Senecal, E., & Dolliver, K. (2009). Why is nature beneficial? The role of connectedness to nature. *Environment and Behavior*, *41*(5), 607–643. https://doi.org/10.1177/0013916508319745

Mejía-Castillo, A. D., López-Suárez, A. D., Estrada Rodríguez, C., & Lagunes-Córdoba, R. (2016). Perceived restorativeness in school spaces of high schools in Xalapa city,México. *Acta Colombiana De Psicologia*, *19*(2), 210–219. https://doi.org/10.14718/ACP.2016.19.2.9

Merritt, E. G. (2017). Going outdoors: A natural antidote for attention fatigue?, *99*(2), 21–25. https://doi.org/10.1177/0031721717734185

Moore, K. D. (2007). Restorative dementia gardens: Exploring how design may ameliorate attention fatigue. *Journal of Housing for the Elderly*, *21*(1-2), 73–88. https://doi.org/10.1300/J081v21n01_05

Nadal, M., Munar, E., Marty, G., & Cela-Conde, C. J. (2010). Visual Complexity and Beauty Appreciation: Explaining the Divergence of Results. *Empirical Studies of the Arts*, *28*(2), 173–191. https://doi.org/10.2190/EM.28.2.d

Nasar, J. L., & Terzano, K. (2010). The desirability of views of city skylines after dark. *Journal of Environmental Psychology*, *30*(2), 215–225. https://doi.org/10.1016/j.jenvp.2009.11.007

Nejati, A., Rodiek, S., & Shepley, M. (2016). Using visual simulation to evaluate restorative qualities of access to nature in hospital staff break areas. *Landscape and Urban Planning*, *148*, 132–138. https://doi.org/10.1016/j.landurbplan.2015.12.012

Nejati, A., Shepley, M., Rodiek, S., Lee, C., & Varni, J. (2016). Restorative Design Features for Hospital Staff Break Areas: A Multi-Method Study. *HERD-HEALTH ENVIRONMENTS RESEARCH & DESIGN JOURNAL*, *9*(2), 16–35. https://doi.org/10.1177/1937586715592632

Nordh, H., Alalouch, C., & Hartig, T. (2011). Assessing restorative components of small urban parks using conjoint methodology. *Urban Forestry & Urban Greening*, *10*(2), 95–103. https://doi.org/10.1016/j.ufug.2010.12.003

Nugent, S. (2013). What is AESTHETIC PREFERENCE? definition of AESTHETIC PREFERENCE (Psychology Dictionary). Retrieved from https://psychologydictionary.org/aesthetic-preference/

Oldenburg, R. (1989). *The great good place: Cafés, coffee shops, bookstores, bars, hair salons, and other hangouts at the heart of a community*. New York: Marlowe.

Osborne, J. W., & Farley, F. H. (1970). The relationship between aesthetic preference and visual complexity in absract art. *Psychonomic Science*, *19*(2), 69–70. https://doi.org/10.3758/BF03337424

Pahl, S., & Wyles, K. (2012). Restorative effects of water environments. *INTERNATIONAL JOURNAL of PSYCHOLOGY*, *47*, 354–355.

Payne, S. R. (2008). Are perceived soundscapes within urban parks restorative? *Proceedings - European Conference on Noise Control*, 5521–5526.

Pegler, M. M. (Ed.). (2000). *Café design*. New York: Visual Reference Publ.

Raanaas, R. K., Evensen, K. H., Rich, D., Sjøstrøm, G., & Patil, G. (2011). Benefits of indoor plants on attention capacity in an office setting. *Journal of Environmental Psychology*, *31*(1), 99–105. https://doi.org/10.1016/j.jenvp.2010.11.005

Ratcliffe, E., Gatersleben, B., & Sowden, P. T. (2016). Associations with bird sounds: How do they relate to perceived restorative potential? *Journal of Environmental Psychology*, *47*, 136–144. https://doi.org/10.1016/j.jenvp.2016.05.009

Roberts, M. N. (2007). Complexity and Aesthetic Prefrence for Diverse Visual Stimuli (Doctoral Thesis). Universitat de les Illes Balears.

Ródenas, M., Sancho-Royo, F., & González-Bernáldez, F. (1975). Structure of landscape preferences. *Landscape Planning*, *2*, 159–178. https://doi.org/10.1016/0304-3924(75)90019-2

Saklofske, D. H. (1975). Visual aesthetic complexity, attractiveness and diversive exploration. *Perceptual and Motor Skills*, *41*(3), 813–814. https://doi.org/10.2466/pms.1975.41.3.813

San Juan, C., Subiza-Perez, M., & Vozmediano, L. (2017). Restoration and the City: The Role of Public Urban Squares. *Frontiers in Psychology*, *8.* https://doi.org/10.3389/fpsyg.2017.02093

Schutte, A. R., Torquati, J. C., & Beattie, H. L. (2016). Impact of Urban Nature on Executive Functioning in Early and Middle Childhood. *Environment and Behavior*, *49*(1), 3–30. https://doi.org/10.1177/0013916515603095

Scopelliti, M., & Vittoria Giuliani, M. (2004). Choosing restorative environments across the lifespan: A matter of place experience. *Journal of Environmental Psychology*, *24*(4), 423–437. https://doi.org/10.1016/j.jenvp.2004.11.002

Scott, S. (1989). Preference, mystery and visual attributes of interiors: a study of relationships (Ph.D.). University of Wisconsin, Madison.

Scott, S. C. (1993a). Visual Attributes Related to Preference in Interior Environments. *Journal of Interior Design*, *18*(1-2), 7–16. https://doi.org/10.1111/j.1939-1668.1993.tb00067.x

Scott, S. C. (1993b). COMPLEXITY and MYSTERY AS PREDICTORS OF INTERIOR PREFERENCES. *Journal of Interior Design*, *19*(1), 25–33. https://doi.org/10.1111/j.1939-1668.1993.tb00149.x

Shelby, B., & Harris, R. (1985). Comparing methods for determining visitor evaluations of ecological impacts: Site visits, photographs, and written descriptions. *Ournal of Leisure Research*, *17*(1), 57–67.

Shibata, S., & Suzuki, N. (2004). Effects of an indoor plant on creative task performance and mood. *Scandinavian Journal of Psychology*, *45*(5), 373–381. https://doi.org/10.1111/j.1467-9450.2004.00419.x

Staats, H., Hartig, T., & Kieviets, A. (2000). Restorative effects of outdoor environments. *INTERNATIONAL JOURNAL of PSYCHOLOGY*, *35*(3-4), 126.

Staats, H., Jahncke, H., Herzog, T. R., & Hartig, T. (2016). Urban options for psychological restoration: Common strategies in everyday situations. *PLoS ONE*, *11*(1), 1–24. https://doi.org/10.1371/journal.pone.0146213

Staats, H., Kieviet, A., & Hartig, T. (2003). Where to recover from attentional fatigue: An expectancy-value analysis of environmental preference. *Journal of Environmental Psychology*, *23*(2), 147–157. https://doi.org/10.1016/S0272-4944(02)00112-3

Stamps, A. E. (1990). Use of Photographs to Simulate Environments: A Meta-Analysis. *Perceptual and Motor Skills*, *71*(3).

Stewart, T. R., Middleton, P., Downton, M., & Ely, D. (1984). Judgments of photographs vs. field observations in studies of perception and judgment of the visual environment. *Journal of Environmental Psychology*, *4*(4), 283–302. https://doi.org/10.1016/S0272-4944(84)80001-8

Stone, R., Small, C., Knight, J., Qian, C., & Shingari, V. (2014). Virtual natural environments for restoration and rehabilitation in healthcare. *Intelligent Systems Reference Library*, *68*, 497–521. https://doi.org/10.1007/978-3-642-54816-1_24

Strother, L., & Kubovy, M. (2003). Perceived complexity and the grouping effect in band patterns. *Acta Psychologica*, *114*(3), 229–244.

Tabrizian, P., Baran, P. K., Smith, W. R., & Meentemeyer, R. K. (2018). Exploring perceived restoration potential of urban green enclosure through

immersive virtual environments. *Journal of Environmental Psychology*, *55*, 99–109. https://doi.org/10.1016/j.jenvp.2018.01.001

Tyrväinen, L., Ojala, A., Korpela, K., Lanki, T., Tsunetsugu, Y., & Kagawa, T. (2014). The influence of urban green environments on stress relief measures: A field experiment. *Journal of Environmental Psychology*, *38*, 1–9. https://doi.org/10.1016/j.jenvp.2013.12.005

Ulrich, R. S. (1981). Natural Versus Urban Scenes: Some Psychophysiological Effects. *Environment and Behavior*, *13*(5), 523–556. Retrieved from https://doi.org/10.1177/0013916581135001

Ulrich, R. S., Simons, R. F., Losito, B. D., Fiorito, E., Miles, M. A., & Zelson, M. (1991). Stress recovery during exposure to natural and urban environments. *Journal of Environmental Psychology*, *11*(3), 201–230. https://doi.org/10.1016/S0272-4944(05)80184-7

Valtchanov, D., Barton, K. R., & Ellard, C. (2010). Restorative Effects of Virtual Nature Settings. *CYBERPSYCHOLOGY BEHAVIOR and SOCIAL NETWORKING*, *13*(5), 503–512. https://doi.org/10.1089/cyber.2009.0308

Van den Berg, A. E., Hartig, T., & Staats, H. (2007). Preference for nature in urbanized societies: Stress, restoration, and the pursuit of sustainability. *Journal of Social Issues*, *63*(1), 79–96. https://doi.org/10.1111/j.1540-4560.2007.00497.x

Van den Berg, A. E., Joye, Y., & Koole, S. L. (2016). Why viewing nature is more fascinating and restorative than viewing buildings: A closer look at perceived complexity. *Urban Forestry and Urban Greening*, *20*, 397–401. https://doi.org/10.1016/j.ufug.2016.10.011

Van den Berg, A. E., Koole, S. L., & van der Wulp, N. Y. (2003). Environmental preference and restoration: (How) are they related? *Journal of Environmental Psychology*, *23*(2), 135–146. https://doi.org/10.1016/S0272-4944(02)00111-1

Van den Berg, A. E., Maas, J., Verheij, R. A., & Groenewegen, P. P. (2010). Green space as a buffer between stressful life events and health. *Social Science & Medicine*, *70*(8), 1203–1210. https://doi.org/10.1016/j.socscimed.2010.01.002

Vercelloni, M., San Pietro, S., & Warchol, P. (Eds.). (2002). *Offices for the digital age in USA*. *International architecture & interiors*. Milano: Edizioni l'archivolto.

Vitz, P. C. (1966). Preference for different amounts of visual complexity. *Behavioral Science*, *11*(2), 105–114. https://doi.org/10.1002/bs.3830110204

Wickelgren, W. A. (1979). Chunking and consolidation: A theoretical synthesis of semantic networks, configuring in conditioning, S-R versus cognitive learning, normal forgetting, the amnesic syndrome, and the hippocampal arousal system. *Psychological Review*, *86*(1), 44–60. https://doi.org/10.1037/0033-295X.86.1.44

Willis, E. J., & Dornbush, R. L. (1968). Preference for Visual Complexity. *Child Development*, *39*(2), 639. https://doi.org/10.2307/1126973

Wohlwill, J. F. (1976). Environmental Aesthetics: The Environment as a Source of Affect. In W. Altman (Ed.), *Human behavior and environment* (pp. 37–86). https://doi.org/10.1007/978-1-4684-2550-5_2

Zajonc, R. B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology*, *9*(2, Pt.2), 1–27. https://doi.org/10.1037/h0025848

Zajonc, R. B., Swap, W. C., Harrison, A. A., & Roberts, P. (1971). Limiting conditions of the exposure effect: Satiation and relativity. *Journal of Personality and Social Psychology*, *18*(3), 384–391. https://doi.org/10.1037/h0030992

Zhang, Y., Kang, J., & Kang, J. (2017). Effects of Soundscape on the Environmental Restoration in Urban Natural Environments. *Noise and Health*, *19*(87), 65–72. https://doi.org/10.4103/nah.NAH-73-16

Zube, E. H., Simcox, D. E., & Law, C. S. (1987). Perceptual Landscape Simulations: History and Prospect. *Landscape Journal*, *6*(1), 62–80. https://doi.org/10.3368/lj.6.1.62

APPENDICES

APPENDIX A

The current version of the Perceived Restorativeness Scale (PRS) is comprised of the 26 items below. Participants make their responses using a 7-point scale to indicate the extent to which the given statement describes their experience in the given setting (0 = Not at all; 6 = Completely). The items are grouped by subscale membership (Being Away, Fascination, Coherence, and Compatibility, respectively):

1. Being here is an escape experience. *
2. Spending time here gives me a break from my day-to-day routine. †
3. It is a place to get away from it all.
4. Being here helps me to relax my focus on getting things done.
5. Coming here helps me to get relief from unwanted demands on my attention.
6. This place has fascinating qualities. *
7. My attention is drawn to many interesting things. *
8. I want to get to know this place better. †
9. There is much to explore and discover here. *
10. I want to spend more time looking at the surroundings. †
11. This place is boring. (-)
12. The setting is fascinating.
13. There is nothing worth looking at here. (-)
14. There is too much going on. (-) *
15. It is a confusing place. (-) *
16. There is a great deal of distraction. (-) *
17. It is chaotic here. (-) *
18. Being here suits my personality. *
19. I can do things I like here. *
20. I have a sense that I belong here. *
21. I can find ways to enjoy myself here. †
22. I have a sense of oneness with this setting. *
23. There are landmarks to help me get around. ‡
24. I could easily form a mental map of this place. ‡
25. It is easy to find my way around here. ‡
26. It is easy to see how things are organized. ‡

Notes: (-) - an item for which the value must be reversed in coding; * - the item is from the earlier PRS and is in its original form; † - the item is from the earlier PRS but is in a revised form; ‡ - the item was designed to represent legibility.

Hartig, T., Korpela, K., Evans, G. W., & Gärling, T. (1997). A measure of restorative quality in environments. *Scandinavian Housing and Planning Research*, *14 VN - r*(Journal Article), 175–194. https://doi.org/10.1080/02815739708730435

APPENDIX B

Berto's PRS_5 (2005)

The statements of the PRS short version follow, with the corresponding ART factor in parentheses (Berto, 2005):

- **That is a place which is away from everyday demands and where I would be able to relax and think about what interests me (being-away);**
- **That place is fascinating; it is large enough for me to discover and be curious about things (fascination);**
- **That is a place where the activities and the items are ordered and organized (coherence);**
- **That is a place which is very large, with no restrictions to movements; it is a world of its own (scope);**
- **In that place, it is easy to orient and move around so that I could do what I like (compatibility)**

Berto, R. (2005). Exposure to restorative environments helps restore attentional capacity. *Journal of Environmental Psychology*, *25*(3), 249–259. https://doi.org/10.1016/j.jenvp.2005.07.001

APPENDIX C

SENARYO
Anketteki değerlendirmeleri aşağıdaki senaryoyu aklınızda tutarak cevaplamanız istenmektedir.
Üzerinde yoğun ve uzun süreli çaba sarf etmenizi gerektiren bir proje için çalıştığınız bir zamanı hatırlayın. Bu dönemde kendinizi nasıl hissettiğinizi hatırlamaya çalışın. Muhtemelen verimli çalışma yetinizin azaldığını ve ara vermeniz gerektiğini hissettiğiniz bir an oldu. Aşağıdaki fotoğraflardaki mekanların, çalışmaya dönmeden önce böyle bir ara vermek için ne derece uygun olduğunu düşünürsünüz?

KAVRAM TANIMLARI	
KARMAŞIKLIK	Bu mekan görsel olarak zengin ve burada bakılacak çok şey var. Burası farklı türde pek çok eleman içeriyor.
AŞİNALIK	Bu mekan bana tanıdık geliyor.
BEĞENİ	Bu mekanı beğendim.
YENİLENME/TAZELENME POTANSİYELİ	Bu mekan çalıştığım işe ara verip verimli çalışma yetimi toparlamama katkı sağlar.
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	Bu mekanda zaman geçirmek günlük rutinimden sıyrılıp, dikkatimi gerektiren şeylerden psikolojik olarak kaçmama olanak sağlar.
HAYRANLIK UYANDIRMA POTANSİYELİ	Bu mekan etkileyici ve çaba sarf etmeden ilgimi çekiyor. Burada dikkatimi çeken ilginç şeyler var.
UYUMLU/AHENKLİ OLMA	Bu mekan bana kendi içinde bütünlüğü olan bir dünya hissiyatı veriyor. Bambaşka bir yerde hissetmemi sağlıyor.
BEKLENTİLERE UYGUNLUK POTANSİYELİ	Bu mekan rahat hissetmeme yardımcı olur ve istediğim şeyleri yapmak için bana kolaylık sağlar.

APPENDIX D

Bu anket, İ. D. Bilkent Üniversitesi, İç Mimarlık ve Çevre Tasarımı Bölümü yüksek lisans öğrencilerinden Aybüke Geyik tarafından, iç mekanların değerlendirilmesi ile ilgili olarak hazırlanmıştır. Kişisel bilgileriniz ve cevaplarınız başka hiçbir amaçla kullanılmayacaktır. Katılım isteğe bağlıdır.

Ayrıntılı bilgi için aybuke.geyik@bilkent.edu.tr adresinden ulaşabilirsiniz.

Bilgilendirmeyi okudum, verdiğim cevapların bahsedilen akademik çalışmada kullanılmasına onay veriyorum.

_____

1. Yaşınız: _____

2. Cinsiyetiniz: Kadın ☐ Erkek ☐ Diğer ☐

3. Bölümünüz: _____

Ankette birbirinden farklı mekanları ilgili kavramlara göre değerlendirmeniz istenmektedir. Bu çalışmada doğru veya yanlış cevap yoktur. Fotoğraflarını göreceğiniz mekanlar hakkındaki ilk izlenimlerinizi ölçek üzerinde işaretlemeniz istenmektedir.

Aşağıda verilen her bir kavramla ilgili görüşünüzü/değerlendirmenizi, 0'dan 10'a kadar bir değerlendirme ölçeğinde en iyi yansıtan rakamı, kavramın yanındaki ölçek üzerinde daire içine alın.

DEĞERLENDİRME

Kavram	0	1	2	3	4	5	6	7	8	9	10

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

[Riga International Airport “primeclass” Business Lounge]. (2017, April). Retrieved from http://www.riga-airport.com/en/main/newsroom/newsletter/2017/april-june/a-new-business-lounge-a-wider-range-of-services

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

[Virgin Australia lounge Melbourne Airport]. (2016, October 30). Retrieved from https://commons.wikimedia.org/wiki/File:Virgin_Australia_lounge_Melbourne_Airport.JPG

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Ritz-Carlton Club Level]. (n.d.). Retrieved from http://www.ritzcarlton.com/en/hotels/colorado/bachelor-gulch/rooms-suites

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Sachser, M. (2017, October 04). [The Press Lounge]. Retrieved from https://nyandabout.com/2017/10/the-press-lounge-uma-das-vistas-mais-incriveis-de-manhattan.html

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Studio Joseph. (n.d.). [Columbia University Law School Lobby Renovation/]. Retrieved from http://www.studiojoseph.com/project/columbia-university-law-school-lobby-renovation/

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Yoshihito, M. (2018, November 07). New Chitose airport lounge. [Digital image]. Retrieved from https://www.flickr.com/photos/mujitra/3009857583

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Studio Joseph. (n.d.). [Columbia University Law School Lobby Renovation/]. Retrieved from http://www.studiojoseph.com/project/columbia-university-law-school-lobby-renovation/

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

[Porto Bay Hotel Falesia Lounge]. (n.d.). Retrieved from https://www.portobay.com/en/hotels/portugal/algarve-portugal/porto-bay-falesia/

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

[Privilege Appart Hotel Clément Ader]. (n.d.). Retrieved from https://clementader.privilegetoulouse.com/en/gallery.html

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

[Pennsylvania College of Health Sciences Office]. (n.d.). Retrieved from https://www.glassdoor.com/Photos/Pennsylvania-College-of-Health-Sciences-Office-Photos-IMG1150059.htm

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Café [Digital image]. Retrieved from https://www.flickr.com/ 4947627163

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

I-5 Design & Manufacture. (2014, July 15). Coeur D'Alene Casino | Nighthawk Lounge Design [Digital image]. Retrieved from https://www.flickr.com/photos/i5design/14857671423

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Café [Digital image]. Retrieved from https://www.flickr.com/28208461085

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Goldberg, C. (2018, January 20). Cafe Select - SoHo, NYC [Digital image]. Retrieved from https://www.flickr.com/photos/chrisgold/39140016124

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Vercelloni, M., San Pietro, S., & Warchol, P. (Eds.). (2002). *Offices for the digital age in USA*. *International architecture & interiors*. Milano: Edizioni l'archivolto.

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Pegler, M. M. (Ed.). (2000). *Café design*. New York: Visual Reference Publ.

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Pegler, M. M. (Ed.). (2000). *Café design*. New York: Visual Reference Publ.

Yukarıdaki mekanı aşağıdaki kavramlara göre değerlendirin:

KARMAŞIKLIK	0	1	2	3	4	5	6	7	8	9	10
AŞİNALIK	0	1	2	3	4	5	6	7	8	9	10
BEĞENİ	0	1	2	3	4	5	6	7	8	9	10
YENİLENME/TAZELENME POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
PSİKOLOJİK UZAKLAŞMA SAĞLAMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
HAYRANLIK UYANDIRMA POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10
UYUMLU/AHENKLİ OLMA	0	1	2	3	4	5	6	7	8	9	10
BEKLENTİLERE UYGUNLUK POTANSİYELİ	0	1	2	3	4	5	6	7	8	9	10

Pegler, M. M. (Ed.). (2000). *Café design*. New York: Visual Reference Publ.

APPENDIX E

LOW	MEDIUM	HIGH
LOUNGES / LOBBIES		
LOW	MEDIUM	HIGH
CAFES / RESTAURANTS		

APPENDIX F

Table 1 – Mean Values for All Variables

VARIABLE	Mean			SD		
PREDEFINED COMPLEXITY	LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
PERCEIVED COMPLEXITY	2.92	3.97	5.99	1.27	1.46	1.56
PREFERENCE	4.64	4.69	5.49	1.52	1.19	1.49
FAMILIARITY	4.65	5.59	4.99	1.46	1.33	1.60
PERCEIVED RESTORATION POTENTIAL	4.55	4.48	4.79	1.57	1.25	2.34
BEING AWAY	4.41	4.35	4.62	1.64	1.30	1.82
FASCINATION	3.73	3.77	4.58	1.70	1.39	1.70
EXTENT	5.40	5.08	5.37	1.66	1.42	1.60
COMPATIBILITY	4.45	4.47	4.89	1.62	1.38	1.70

VARIABLE	MEAN	SD
COMPLEXITY	4.2944	1.11699
FAMILIARITY	5.0751	1.20088
PREFERENCE	4.9377	1.12770
PERCEIVED RESTORATION	4.6067	1.33530
BEING AWAY	4.4603	1.29698
FASCINATION	4.0267	1.35492
EXTENT	5.2835	1.29007
COMPATIBILITY	4.6033	1.31249

Table 2. Repeated Measures ANOVA Results for Predefined Complexity - Perceived Complexity

COMPLEXITY	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
LOW	2.923	.127	2.671	3.174
MEDIUM	3.971	.146	3.682	4.260
HIGH	5.989	.156	5.680	6.299

Multivariate Tests[a]									
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
COMPLEXITY	Pillai's Trace	.761	156.135[b]	2.000	98.000	.000	.761	312.271	1.000
	Wilks' Lambda	.239	156.135[b]	2.000	98.000	.000	.761	312.271	1.000
	Hotelling's Trace	3.186	156.135[b]	2.000	98.000	.000	.761	312.271	1.000
	Roy's Largest Root	3.186	156.135[b]	2.000	98.000	.000	.761	312.271	1.000

a. Design: Intercept
Within Subjects Design: COMPLEXITY

b. Exact statistic

c. Computed using alpha = .05

Pairwise Comparisons						
(I) COMPLEXITY	(J) COMPLEXITY	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
LOW	MEDIUM	-1.048*	.135	.000	-1.377	-.719
	HIGH	-3.067*	.173	.000	-3.489	-2.644
MEDIUM	LOW	1.048*	.135	.000	.719	1.377
	HIGH	-2.018*	.155	.000	-2.397	-1.640
HIGH	LOW	3.067*	.173	.000	2.644	3.489
	MEDIUM	2.018*	.155	.000	1.640	2.397

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 3. Repeated Measures ANOVA Results for Predefined Complexity – Preference

Descriptive Statistics			
	Mean	Std. Deviation	N
L. PREFERENCE	4.6357	1.52417	100
M. PREFERENCE	4.6920	1.19075	100
H. PREFERENCE	5.4854	1.48664	100

Multivariate Tests[a]									
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
PREFERENCE	Pillai's Trace	.238	15.342[b]	2.000	98.000	.000	.238	30.685	.999
	Wilks' Lambda	.762	15.342[b]	2.000	98.000	.000	.238	30.685	.999
	Hotelling's Trace	.313	15.342[b]	2.000	98.000	.000	.238	30.685	.999
	Roy's Largest Root	.313	15.342[b]	2.000	98.000	.000	.238	30.685	.999

a. Design: Intercept
Within Subjects Design: PREFERENCE

b. Exact statistic

c. Computed using alpha = .05

Pairwise Comparisons						
(I) PREFERENCE	(J) PREFERENCE	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
LOW	MEDIUM	-.056	.111	1.000	-.326	.213
	COMPLEX	-.850*	.176	.000	-1.279	-.421
MEDIUM	LOW	.056	.111	1.000	-.213	.326
	COMPLEX	-.793*	.144	.000	-1.145	-.442
HIGH	LOW	.850*	.176	.000	.421	1.279
	MEDIUM	.793*	.144	.000	.442	1.145

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 4. Two Tailed Pearson Correlation Results

Correlations

		PERCEIVED COMPLEXITY	FAMILIARITY	PREFERENCE	PERCEIVED RESTORATION	BEING AWAY	FASCINATION	EXTENT	COMPATIBILITY	AGE
PERCEIVED COMPLEXITY	Pearson Correlation	1								
	Sig. (2-tailed)									
FAMILIARITY	Pearson Correlation	.466**	1							
	Sig. (2-tailed)	0.000								
PREFERENCE	Pearson Correlation	.295**	.588**	1						
	Sig. (2-tailed)	0.003	0.000							
PERCEIVED RESTORATION	Pearson Correlation	0.166	.434**	.815**	1					
	Sig. (2-tailed)	0.098	0.000	0.000						
BEING AWAY	Pearson Correlation	0.176	.465**	.848**	.854**	1				
	Sig. (2-tailed)	0.079	0.000	0.000	0.000					
FASCINATION	Pearson Correlation	.239*	.461**	.850**	.834**	.858**	1			
	Sig. (2-tailed)	0.017	0.000	0.000	0.000	0.000				
EXTENT	Pearson Correlation	.250*	.529**	.772**	.623**	.652**	.611**	1		
	Sig. (2-tailed)	0.012	0.000	0.000	0.000	0.000	0.000			
COMPATIBILITY	Pearson Correlation	.218*	.488**	.866**	.754**	.785**	.790**	.766**	1	
	Sig. (2-tailed)	0.029	0.000	0.000	0.000	0.000	0.000	0.000		
AGE	Pearson Correlation	.251*	-0.043	-0.165	-.227*	-0.180	-0.185	-0.096	-0.156	1
	Sig. (2-tailed)	0.012	0.670	0.102	0.023	0.074	0.066	0.343	0.120	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 5. Repeated Measures ANOVA Results for Manipulated Complexity – Perceived Restoration Potential

Descriptive Statistics			
	Mean	**Std. Deviation**	**N**
L. PERCEIVED RESTORATION	4.5473	1.56685	100
M. PERCEIVED RESTORATION	4.4800	1.25491	100
H. PERCEIVED RESTORATION	4.7929	2.33955	100

Multivariate Tests[a]									
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
PRP	**Pillai's Trace**	.020	1.021[b]	2.000	98.000	.364	.020	2.042	.224
	Wilks' Lambda	.980	1.021[b]	2.000	98.000	.364	.020	2.042	.224
	Hotelling's Trace	.021	1.021[b]	2.000	98.000	.364	.020	2.042	.224
	Roy's Largest Root	.021	1.021[b]	2.000	98.000	.364	.020	2.042	.224

a. Design: Intercept
Within Subjects Design: PRP
b. Exact statistic
c. Computed using alpha = .05

Tests of Within-Subjects Effects									
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
PRP	Sphericity Assumed	5.426	2	2.713	1.306	.273	.013	2.612	.281
	Greenhouse-Geisser	5.426	1.442	3.763	1.306	.268	.013	1.883	.240
	Huynh-Feldt	5.426	1.457	3.723	1.306	.268	.013	1.903	.241
	Lower-bound	5.426	1.000	5.426	1.306	.256	.013	1.306	.205
Error(PRP)	Sphericity Assumed	411.272	198	2.077					
	Greenhouse-Geisser	411.272	142.746	2.881					
	Huynh-Feldt	411.272	144.290	2.850					
	Lower-bound	411.272	99.000	4.154					

a. Computed using alpha = .05

Table 6. Repeated Measures ANOVA Results for Manipulated Complexity – Familiarity

familiarity	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Low	4.645	.146	4.356	4.935
Medium	5.594	.133	5.330	5.858
High	4.986	.160	4.669	5.303

Tests of Within-Subjects Effects

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
familiarity	Sphericity Assumed	46.165	2	23.082	21.664	.000	.180	43.328	1.000
	Greenhouse-Geisser	46.165	1.847	24.990	21.664	.000	.180	40.020	1.000
	Huynh-Feldt	46.165	1.881	24.544	21.664	.000	.180	40.747	1.000
	Lower-bound	46.165	1.000	46.165	21.664	.000	.180	21.664	.996
Error(familiarity)	Sphericity Assumed	210.962	198	1.065					
	Greenhouse-Geisser	210.962	182.884	1.154					
	Huynh-Feldt	210.962	186.205	1.133					
	Lower-bound	210.962	99.000	2.131					

a. Computed using alpha = .05

Tests of Within-Subjects Effects

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
familarity	Sphericity Assumed	46.165	2	23.082	21.664	.000
	Greenhouse-Geisser	46.165	1.847	24.990	21.664	.000
	Huynh-Feldt	46.165	1.881	24.544	21.664	.000
	Lower-bound	46.165	1.000	46.165	21.664	.000
Error(fam)	Sphericity Assumed	210.962	198	1.065		
	Greenhouse-Geisser	210.962	182.884	1.154		
	Huynh-Feldt	210.962	186.205	1.133		
	Lower-bound	210.962	99.000	2.131		

Pairwise Comparisons

(I) fam	(J) fam	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
low	medium	-.948*	.124	.000	-1.252	-.645
	high	-.341	.161	.109	-.733	.051
medium	low	.948*	.124	.000	.645	1.252
	high	.607*	.150	.000	.242	.973
high	low	.341	.161	.109	-.051	.733
	medium	-.607*	.150	.000	-.973	-.242

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

. Adjustment for multiple comparisons: Bonferroni.

Table 7. One Sample ANOVA Results for Schools

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
COMPLEXITY	**Between Groups**	4.354	2	2.177	1.772	.175
	Within Groups	119.166	97	1.229		
	Total	123.520	99			
FAMILIARITY	**Between Groups**	2.667	2	1.333	.923	.401
	Within Groups	140.101	97	1.444		
	Total	142.768	99			
PREFERENCE	**Between Groups**	4.466	2	2.233	1.784	.173
	Within Groups	121.433	97	1.252		
	Total	125.898	99			
PERCEIVED RESTORATION	**Between Groups**	7.850	2	3.925	2.257	.110
	Within Groups	168.669	97	1.739		
	Total	176.518	99			
BEING AWAY	**Between Groups**	12.601	2	6.301	3.970	.022
	Within Groups	153.932	97	1.587		
	Total	166.534	99			
FASCINATION	**Between Groups**	7.464	2	3.732	2.077	.131
	Within Groups	174.281	97	1.797		
	Total	181.745	99			
EXTENT	**Between Groups**	6.026	2	3.013	1.841	.164
	Within Groups	158.738	97	1.636		
	Total	164.764	99			
COMPATIBILITY	**Between Groups**	16.782	2	8.391	5.294	.007
	Within Groups	153.758	97	1.585		
	Total	170.540	99			

Multiple Comparisons (Scheffe)							
Dependent Variable	**(I) SCHOOL**	**(J) SCHOOL**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**	**95% Confidence Interval**	
						Lower Bound	**Upper Bound**
BEING AWAY	**Hacettepe**	**Bilkent**	-.34798	.26884	.436	-1.0163	.3204
		OMÜ	-1.30831*	.46820	.023	-2.4723	-.1443
COMPATIBILITY	**Hacettepe**	**Bilkent**	-.37820	.26869	.375	-1.0462	.2898
		OMÜ	-1.51502*	.46794	.007	-2.6783	-.3517

*. The mean difference is significant at the 0.05 level.

Table 8. One Sample ANOVA Results for Faculties

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
COMPLEXITY	**Between Groups**	.271	3	.090	.070	.976
	Within Groups	123.249	96	1.284		
	Total	123.520	99			
FAMILIARITY	**Between Groups**	3.068	3	1.023	.703	.553
	Within Groups	139.701	96	1.455		
	Total	142.768	99			
PREFERENCE	**Between Groups**	3.677	3	1.226	.963	.414
	Within Groups	122.221	96	1.273		
	Total	125.898	99			
PERCEIVED RESTORATION	**Between Groups**	5.354	3	1.785	1.001	.396
	Within Groups	171.164	96	1.783		
	Total	176.518	99			
BEING AWAY	**Between Groups**	8.099	3	2.700	1.636	.186
	Within Groups	158.435	96	1.650		
	Total	166.534	99			
FASCINATION	**Between Groups**	7.641	3	2.547	1.404	.246
	Within Groups	174.104	96	1.814		
	Total	181.745	99			
EXTENT	**Between Groups**	5.192	3	1.731	1.041	.378
	Within Groups	159.572	96	1.662		
	Total	164.764	99			
COMPATIBILITY	**Between Groups**	12.027	3	4.009	2.428	.070
	Within Groups	158.513	96	1.651		
	Total	170.540	99			

Table 9. One Sample ANOVA Results for Gender

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
COMPLEXITY	Between Groups	.661	1	.661	.528	.469
	Within Groups	122.859	98	1.254		
	Total	123.520	99			
FAMILIARITY	Between Groups	5.647	1	5.647	4.036	.047
	Within Groups	137.121	98	1.399		
	Total	142.768	99			
PREFERENCE	Between Groups	.836	1	.836	.655	.420
	Within Groups	125.062	98	1.276		
	Total	125.898	99			
PERCEIVED RESTORATION	Between Groups	.186	1	.186	.103	.748
	Within Groups	176.332	98	1.799		
	Total	176.518	99			
BEING AWAY	Between Groups	1.406	1	1.406	.835	.363
	Within Groups	165.127	98	1.685		
	Total	166.534	99			
FASCINATION	Between Groups	.560	1	.560	.303	.583
	Within Groups	181.184	98	1.849		
	Total	181.745	99			
EXTENT	Between Groups	3.538	1	3.538	2.150	.146
	Within Groups	161.226	98	1.645		
	Total	164.764	99			
COMPATIBILITY	Between Groups	1.646	1	1.646	.955	.331
	Within Groups	168.893	98	1.723		
	Total	170.540	99			

Group Statistics					
	GENDER	N	Mean	Std. Deviation	Std. Error Mean
FAMILIARITY	Female	52	4.8468	1.23910	.17183
	Male	48	5.3225	1.11867	.16147

Table 10. Reliability Test Results

Reliability Statistics	
Cronbach's Alpha	N of Items
.939	5

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PERCIVED RESTORATION	18.3739	22.313	.854	.921
BEING AWAY	18.5203	22.358	.883	.916
FASCINATION	18.9539	22.050	.863	.919
EXTENT	17.6971	24.140	.715	.945
COMPATIBILITY	18.3772	22.422	.862	.919

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
22.9806	34.865	5.90465	5

Table 11. Mediation Analyses by PROCESS macro

```
Run MATRIX procedure:

**************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : PREFEREN
    X  : COMPLEXI
   M1  : BEINGAWA
   M2  : FASCINAT
   M3  : EXTENT
   M4  : COMPATIB

Sample
Size:  100

**************************************************************************
OUTCOME VARIABLE:
 BEING AWAY

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .1764      .0311     1.6465     3.1458     1.0000    98.0000      .0792

Model
              coeff         se          t          p       LLCI       ULCI
constant     3.5809      .5121     6.9922      .0000     2.5646     4.5973
COMPLEXI      .2048      .1155     1.7737      .0792     -.0243      .4339

**************************************************************************
OUTCOME VARIABLE:
 FASCINAT

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2389      .0571     1.7487     5.9304     1.0000    98.0000      .0167

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.7824      .5278     5.2717      .0000     1.7350     3.8298
COMPLEXI      .2898      .1190     2.4352      .0167      .0536      .5259

**************************************************************************
OUTCOME VARIABLE:
 EXTENT

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2496      .0623     1.5766     6.5087     1.0000    98.0000      .0123

Model
              coeff         se          t          p       LLCI       ULCI
constant     4.0457      .5011     8.0730      .0000     3.0512     5.0402
COMPLEXI      .2882      .1130     2.5512      .0123      .0640      .5124

**************************************************************************
OUTCOME VARIABLE:
 COMPATIB

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2183      .0477     1.6572     4.9061     1.0000    98.0000      .0291

Model
              coeff         se          t          p       LLCI       ULCI
constant     3.5016      .5138     6.8149      .0000     2.4819     4.5212
COMPLEXI      .2566      .1158     2.2150      .0291      .0267      .4864
```

Table 11. Mediation Analyses by PROCESS macro (continued)

```
OUTCOME VARIABLE:
 PREFEREN

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .9309      .8666      .1786   122.1597     5.0000    94.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant      .6742      .2237     3.0134      .0033      .2300     1.1184
COMPLEXI      .0726      .0397     1.8258      .0711     -.0063      .1515
BEINGAWA      .2069      .0688     3.0057      .0034      .0702      .3436
FASCINAT      .2280      .0665     3.4286      .0009      .0960      .3600
EXTENT        .1877      .0524     3.5832      .0005      .0837      .2917
COMPATIB      .2431      .0664     3.6598      .0004      .1112      .3749

************************* TOTAL EFFECT MODEL ***************************
OUTCOME VARIABLE:
 PREFEREN

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2947      .0868     1.1731     9.3177     1.0000    98.0000      .0029

Model
              coeff         se          t          p       LLCI       ULCI
constant     3.6602      .4323     8.4668      .0000     2.8023     4.5181
COMPLEXI      .2975      .0975     3.0525      .0029      .1041      .4909

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps       c_cs
      .2975      .0975     3.0525      .0029      .1041      .4909      .2638      .2947

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps      c'_cs
      .0726      .0397     1.8258      .0711     -.0063      .1515      .0644      .0719

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
TOTAL        .2249      .1219      .0014      .4794
BEINGAWA     .0424      .0371     -.0115      .1337
FASCINAT     .0661      .0442      .0027      .1712
EXTENT       .0541      .0322      .0018      .1262
COMPATIB     .0624      .0457     -.0049      .1702
(C1)        -.0237      .0449     -.1203      .0663
(C2)        -.0117      .0354     -.0790      .0675
(C3)        -.0200      .0367     -.0985      .0526
(C4)         .0120      .0429     -.0623      .1102
(C5)         .0037      .0538     -.1111      .1130
(C6)        -.0083      .0398     -.1024      .0603

Partially standardized indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
TOTAL        .1994      .1000      .0014      .3956
BEINGAWA     .0376      .0311     -.0118      .1096
FASCINAT     .0586      .0371      .0027      .1437
EXTENT       .0480      .0275      .0018      .1079
COMPATIB     .0553      .0387     -.0048      .1435
(C1)        -.0210      .0391     -.1051      .0572
(C2)        -.0104      .0312     -.0718      .0577
(C3)        -.0177      .0322     -.0860      .0449
(C4)         .0106      .0376     -.0562      .0937
(C5)         .0033      .0471     -.0953      .0957
(C6)        -.0073      .0348     -.0877      .0522
```

Table 11. Mediation Analyses by PROCESS macro (continued)

```
Completely standardized indirect effect(s) of X on Y:
             Effect     BootSE   BootLLCI   BootULCI
TOTAL         .2228      .1073      .0015      .4281
BEINGAWA      .0420      .0339     -.0131      .1213
FASCINAT      .0654      .0404      .0028      .1566
EXTENT        .0536      .0294      .0020      .1154
COMPATIB      .0618      .0417     -.0055      .1547
(C1)         -.0235      .0427     -.1147      .0641
(C2)         -.0116      .0339     -.0764      .0640
(C3)         -.0198      .0350     -.0935      .0486
(C4)          .0118      .0412     -.0591      .1032
(C5)          .0037      .0515     -.1029      .1070
(C6)         -.0082      .0379     -.0941      .0573

Specific indirect effect contrast definition(s):
(C1)          BEINGAWA  minus   FASCINAT
(C2)          BEINGAWA  minus   EXTENT
(C3)          BEINGAWA  minus   COMPATIB
(C4)          FASCINAT  minus   EXTENT
(C5)          FASCINAT  minus   COMPATIB
(C6)          EXTENT    minus   COMPATIB

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

NOTE: Variables names longer than eight characters can produce incorrect output.
      Shorter variable names are recommended.

------ END MATRIX -----
```