

Unison of the phenomenological theory of genius loci and islamic philosophy-Dispositional influence of climate and its consequences on the design of environment

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Abstract

Some phenomenologists have tried to interpret the cultural differences of identity in a variety of climatic and natural fields in the light of the Genius Loci theory. The theory has been verified in many studies by the traditional-Islamic philosophers. Proving the closeness of these two viewpoints in extent and type of the environmental influences on disposition can open a venue for applying the theory of Genius Loci to establish a basis for environmental design in regions with Islamic and traditional cultures. This research traces the origins of this theory to the ancient Islamic philosophy. In the first step, the relationships between environmental and cultural characters are explained in four climate-dispositional patterns using Christian Norberg-Schulz's theory of Genius Loci. The second step deals with the philosophical origins of the theory within the Islamic thoughts through four patterns. Islamic philosophers have considered the types and the extent of climate's influences on disposition and have distinguished different faculties and behavioral affordances for various temperaments and four climates - "hot and dry", "hot and wet", "cold and dry" and "cold and wet". Temperament and the hot and dry climate have shown to be suitable for the moral training of the mankind and assume the character traits of the God. The findings of the present study, the phenomenologist's ideas concerning the character type and environmental/cultural characters in different climates, and the association of the environment and human, have over lapses with the theories of the Islamic philosophers.

Keywords: Climate, Genius loci, Character, Disposition, Temperament, Islamic philosophy

1. Introduction

Psychologists and phenomenologists of the present age have shown that sensational, mental and behavioral reactions of the individual have a logical and robust connection with one's childhood, mental and sentimental upbringing as well as one's living environment. However, there are still questions for the practitioners of this science about the extent and state of the mutual influence, type and quality of human behaviors in relation with the intrinsic features of the environment. This article aims to answer the current question from the perspective of phenomenologists and the traditional Islamic

philosophers. Taking the theories into account, we will begin with the Genius Loci -Phenomenology of Christian Norberg-Schulz- on the type of cultural and environmental characters of the places. This will be followed by tracing these ideas back in the works of the Islamic scholars, and finally, implications for designing the environment will be presented.

In order to do a comprehensive investigation, an inclusive sample with an extensive domain ranging from peripatetic philosophy, and Illuminationist philosophy, to gnosis and sociology was selected. Therefore, Ibn-sina's viewpoints in peripatetic philosophy, Suhrawardi's in Illuminationist philosophy, Ibn-Arabi's in gnosis and Ibn-Khaldun's in sociology and history were examined. As these Islamic scholars have studied the influence of the environment on disposition and behavior, divine features of this topic is considered by them.

2. Research questions

1. What are the viewpoints of behavioral psychologists, phenomenologist and the Islamic philosophers towards the

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influence of climate on disposition and behavior? (The extent of influence)

2. How do various environments and, especially, climates influence human disposition and behavior? (The type of influence)

3. From the Islamic philosophers' perspective, which types of climates and temperaments are most affordance for the development of moral training of mankind toward proper behaviors and assume the character traits of the God? (Transcendences)

4. How should architecture and man-made place proceed in order to organize the temperamental and environmental characteristics? (environmental and architectural design)

3. Research background

This line of research can be traced back to the western and Islamic thoughts. Majority of the western studies, which will be discussed briefly, have employed experimental and statistical methods to evaluate the influence of man-made environments on human behavior. These can be investigated from four approaches: free-will, possibilistic, deterministic and probabilistic.

Free-will approach believes that the environment has no influence on human behavior. However, it argues that there are biological limitations for human being, which makes this approach not defendable. On the other hand, theoreticians of determinism have firm beliefs in certain and determined influence of the natural factors. This approach considers a causal relationship between the environment and behavior [1]. Environmental designers of the theory believe that the quality of the environmental design is like the intrinsic attribute of the physical environment and exists independent of the observer. They consider the quality of the environmental design to be an identity which belongs to the environment and, especially, to the form [2].

Believers in possibilistic approach consider the environment to be more than just the provider of uncertain patterns of human behavior. Behavioral analyses show that human beings are not freer in behavior than what possibilists believe them to be. Each individual has a series of motives and faculties a portion of which, at least, is determined by the social, geographical and cultural environment one lives in [1]. Environmental designers of the theory believe that the issue of environmental qualities is a mental and subjective one which is made by observer and makes no real sense in the structural environment [2]. Probabilistic approach believes in uncertainty of the system of interaction between human behavior and the man-made environment, but they assume that the basis of human behavior is not variable. Finally, the probabilistic viewpoint has been the basis of most recent studies on the relationship between behavior and the environment [1]. Environmental designers of this approach believe that structural characteristics of the environment as well as the patterns, cultural codes and mental abilities are effective in the identification of the environmental qualities [2].

Phenomenologists, particularly Christian Norberg-Schulz in his book named *Genius Loci*, have tried to introduce roots

of the cultural-behavioral symbols and even of the religious doctrines in the environmental characters -a theory which is called *Genius Loci*- along with human-environment associate. Schulz knows Islam and all its symbols as the genius of the desert. He believes both Judaism and Christianity stem from desert, although their doctrines have become humanized by the more friendly landscape of Palestine [3]. He tries to introduce the desert character as the root of monotheism and of the manifestation of the concept of God.

Some studies can also be found on the Islamic philosophical thoughts, which consider environments to be the divine manifestations. God has manifested in any region first through the environment and then through religion and knowledge. Human transcendence is believed to be dependent on the evolution from climate distinctions and reaching the common divine-human status, which will be discussed further in the following section.

4. Culture and landscape characters in the phenomenological theory of Christian Norberg-Schulz (*Genius Loci*)

Christian Norberg-Schulz explains three main patterns of place characters namely Romantic, Cosmic and Classic in terms of being ground/sky and the spatial characteristics of the environment. Romantic landscape with cold and wet climate and cosmic landscape with the hot and dry climate are two completely distinct characteristics while the classic character is located somewhere in between.

4.1. Romantic landscape; the ground is rarely continuous, but it is subdivided and has a varied relief; rocks and depression, groves and glades, bushes and tufts which create a rich microstructure. The sky is hardly experienced as a total hemisphere, but is harrowed in between the contours of trees and rocks, and is; moreover, continuously modified by clouds. The sun is relatively low and creates a varied play of sports of light and shadow, cloud and vegetation acting as enriching filters. Water is ever present as a dynamic element, both as running streams and quiet, reflecting ponds. In the Nordic landscape therefore, man encounters a host of natural force, where a general unifying order is lacking. It has already been suggested that a Nordic man has to approach nature with empathy; he has to live with nature in an intimate sense. Direct participation is thus more important than abstraction of the elements and orders. This participation; however, is not social. Rather, it implies that the individual finds his own "hiding-place" in nature [3].

4.2. Cosmic landscape; in the desert, complexities of our concrete life are reduced to a few simple phenomena: The infinite extension of the monotonous barren ground: the immense, embracing value of cloudless sky (which is rarely experienced as a sector between rocks and tree); the burning sun which gives an almost shadow-less light; and the dry, warm air, which tell us how important breathing is for the experience of place. As a whole, the environment

seems to make an absolute and eternal order manifest a world which is distinguished by permanence and structure [3] (Figure. 1).

4.3. *Romantic architecture*; as “romantic” we designate an architecture which is distinguished by multiplicity and variety. It cannot easily be understood in logical terms, but it seems irrational and subjective. Romantic architecture is characterized by a strong atmosphere and may appear fantastic and mysterious, but also intimate and idyllic. In general, it is distinguished by a live and dynamic character, and aims at expression, its forms seem to be a result of “growth” rather than organization, and resembles the forms of living nature. Romantic space is topological rather than geometrical [3] (Figure. 2).

4.4. *Cosmic architecture*; as “cosmic” we designate an architecture which is distinguished by uniformity and absolute order. It can be understood as an integrated logical system, and seems rational and abstract, in the sense of transcending the individual concrete situation. Cosmic architecture is

distinguished by a certain lack of “atmosphere”, and by a very limited number of basic characters. It is neither “fantastic” nor “idyllic”, words which denote direct human participation, but remain aloof. Its forms are static rather than dynamic, and seem to be the revelation of a “hidden” order, rather than the result of concrete composition. It aims at “necessity” rather than expression. Cosmic space is strictly geometrical and is usually axial. It is uniform and isotropic, although its directions are qualitatively different. That is, the qualitative differences are not expressed as such, but are absorbed by the system. Cosmic space, however, also knows an “inversion” which we may call “labyrinthine space” [3]. The character of cosmic architecture is also distinguished by abstraction. Thus, it shuns sculptural presence, and tends to dematerialize volumes and surfaces by means of “carpet-like” decoration (mosaic, glazed tile etc.), or by the introducing an intricate geometrical web. In interior space, this character becomes the manifestation of an ideal world, a paradise of white, green, and blue, that is, the color of pure light, vegetation and water, which represents the goal of man’s desert voyage [3] (Figure. 3, Table 1).



Fig. 1. Romantic landscape with cold and wet climate and cosmic landscape with hot and dry climate



Fig. 2. Romantic architecture (Man-made place)



Fig. 3. Cosmic architecture (man-made place)

Table 1. Culture, natural and man-made characters of landscapes in the phenomenological theory of Genius Loci

Genius Loci (landscape)	Natural place characters		Cultural Characters	Man made place characters
	Morphology & topology (Geometry, Ground, Sky)	Climate	(Introversion, Extroversion, Freedom, Abstraction, Zealotry of identity)	Topology & Morphology (Color, Identity, Geometry, Signs)
Romantic landscape	1- varied relief	1-water is present	1-mutable	1-multiplicity and variety
	2-water is dynamic element	2- sun is relatively low	2-incomprehensive	2-irrational and subjective
	3-sky is hardly experience as a total hemisphere	3- wet, cold air	3-approach nature with empathy	3-live and dynamic character
	4- rarely continuous		4-direct participation	4-forms seem to be result of growth rather than organization
	5- unifying order is lacking		5-not social	5-the forms of living nature
	6-earth is dominate		6-"hiding – place"	6-topological
			7- art nouveau style	7- free and varied row
			8-sense of freedom	8-irregular enclosure
			9-expression	9-complexity and contradiction
			10-phantastic and mysterious	10-play of color
			11-dwelling: micro to the macro level	11-multiplication in member
			12-force of the earth	12-variation in detailing
			13-God is hidden	13-free ornament
cosmic landscape	1-few, simple phenomena	1-dry, warm air	1-shuns sculptural presence	1-uniformity and absolute order
	2-continuous neutral		2-monotheism	2- integrated logical system
	3-absolute and eternal order manifest		3-Islam, Judaism and Christianity stem from desert	3- rational and abstract
	4- permanence and structure		4-sense of belonging	4-neither phantastic nor idyllic
	5-abstract order		5-necessity	5-static rather dynamic
			6-eternal order	6- aloof
			7-dwelling: macro to the micro level	7- revelation of a hidden order
			8-force of the sky	8-uniform and isotropic
			9-God is absolute	9-labyrinthine space
				9-geometrical
classical landscape	1-neither characterize by monotony nor by multifariousness	1-Transparent air	1-the Practical use of agriculture	1-image ability and articulate order
	2-simultaneously continuous and varied	2-strong and distribute light	2-equal partner between nature and human	2-the form are neither static nor dynamic
	3-distinct element		3-mysterious and order	3-topological and geometrical
	4-neither is absorbed by a abstract system nor has to find his private hiding – place		4-all dimensions are "human"	4-play of light and shadow
			5-sense of belonging and freedom	

5. Climate and disposition in the doctrine of Ibn-Sina, the philosopher of peripatetic

In order to explain the influence of climate on disposition in the viewpoint of Ibn-sina, mutual relations of soul (dispositional state) and body (physical state) should be discussed first. Ibn-Sina believes that the soul state has direct influence on the body. As a physician and a philosopher, he was aware of the mutual influences of soul and body and had also noticed the influences of the body on the soul, especially, temperaments as characteristics of the body. Meanwhile, he also pointed out the relationship between the five senses and objects in forming some images and habits. He writes on behalf of Claudius Galenus that: "Hot temperament of brain is followed by delirium which will cause levity, incautious plans

and instability of decisions. On the other hand, cold temperament of brain creates unintelligence and immobility which will lead to inconsideration and inaction. Dry temperament can cause insomnia and people who are watchful and must be regarded as dry-tempered [4]". Ibn-Sina explained several examples for the influence of body on soul (Table 2).

Ibn-sina, like other Muslim physicians and ancient Greek like Alcmeon Croton, considers all disease, in fact, to be due to destruction of this equilibrium by the excess of some quality, and all cures are an attempt to re-establish the harmony between the opposites [5]. Ibn-Sina classifies individuals with equable temperament as powerful in terms of sensation and kinetic actions while modest and regular in terms of behavior. Ibn-Sina, in Iranian traditional medicine,

Table 2. Influence of temperament on disposition, behavior and Observable characteristics of human beings

Dominant quality	hotness	Coldness	Wetness	Dryness
disposition and Behavior (heart temper)	Braveness, Freshness at work, precipitation, Irascibility	Weariness at work	Moody, irritable, forgetful; changes opinions quickly	Pertinacious, calm, doesn't forgets, unless irritated
Observable characteristics	Big breath and fast pulse, blushed eyes, broad and hairy breast, light sleep	Short breath and slow pulse, hairless breast, complete and heavy sleep	Weak pulse, big eyes, heavy and long sleep	Strong pulse, small eyes, short sleep

adopted techniques to diagnose temper disorders and offered a medical solution for each of them.

Natural's philosophy in Iranian traditional medicine are said to depend on human creation and equilibrium which has seven components and indicates levels of influence from climate to disposition [6] (Figure 4).

The four principles of which mineral, plants, and animals are comprised of, constitute the human body and through their combination give rise to humors and qualities [5]. The four elements manifest in their admixture and all the qualities which the human body displays. "The elements are simple bodies. They are the primary components of human being throughout all its parts, as well as of all other bodies in their varied and diverse form. Various orders of being depend on their existence and the intermixture of the elements [4]"

The temperament of each individual is unique and equable only with respect to his race and the geographic region to which he belongs; climate has a major effect upon the human being not only in a "naturalistic" manner but also because of the close relationship which always exists between man as the microcosm and cosmic milieu [5]. "It seems that various inhabitants of the Earth have received a temperament appropriate for the conditions of their particular climate and in each case there is a corresponding range between the two extremes [4]". Ibn-Sina believes that substances, limbs, seasons, times, climate and places all have temperament. Various places influence the temperament of individuals differently and the temperament of people from any region depends on its geography.

The temperament of mountainous regions is cold and dry while the desert lands have hot and dry temperament. Seaside regions have cold and wet or hot and wet temperaments

(Figure. 5).

Ibn-Sina attributes the modest temperament of human beings to their race and the weather of their homeland. Weather is affects the temperament in terms of not only the natural but also the celestial aspects and the close correlation between human and the universe. For example, the fourth climate zone, which is the most equable of all, has people whose temperament is more moderate than the residents of the other zones [4].

According to what has been discussed so far, it can be said that temperament of the place is in agreement with human temperament. In other words, observing the physical qualities of the quadruplet elements in the environment can lead to identifying the behavioral characteristics and disposition of the human beings. For example, humidity and water which do not have specific shapes and take the shape of their containers are relevant to anyone who has a somewhat wet temperament. People with wet temperament understand and perceive quickly and forget what they have perceived very quickly. One other example is a dry object which hardly is shaped, but once shaped it would be very difficult to change it; exactly like the disposition and behavioral characteristics of anyone who has a somewhat dry temperament. They learn late but once they learn something, it would be rather impossible for them to forget. As humidity causes flexibility, heat can lead to mobility, dynamism and movement in objects and phenomena.

In other words, intensity is arisen from hot climate and temperament. In contrast to hotness, coldness will decrease mobility and movement and gives human or other creatures with the same temperament a kind of indolence and slowness. Thus, human disposition conform to his/her natural environment.

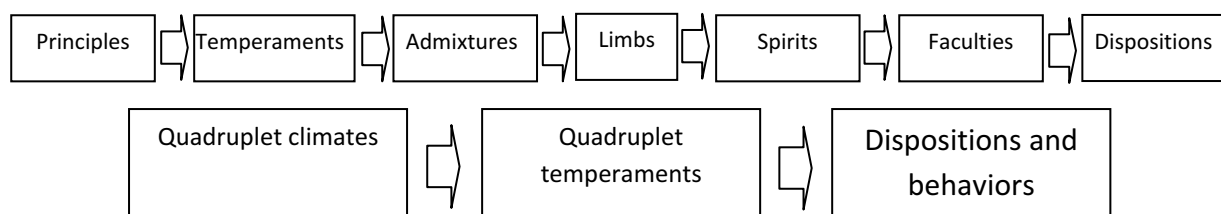


Fig. 4. Level of natural's philosophy in Iranian tradition medicine and influence of climate on human temperament and disposition



Fig. 5. Texture of quadruplet climates according to the four tempers: From left to right: (above) scattered and free texture in cold and wet climate (One of the villages in Māzandarān), scattered and regular texture in hot and wet climate (Būshīhr) - (below) massive and free texture in cold and dry climate (One of the villages in Payinkouh-Zanjan), and massive and regular texture in hot and dry climate (historical texture of Yazd)

6. Climate and disposition in the viewpoint of Suhrawardi in the Illuminationist philosophy

The Illuminationist doctrine of Suhrawardi has made him believe in an ideal and empyrean world due to presence of all types of climates and dispositions. The existence of such a constant source for all the natural phenomena could strengthen the geographical and ultra-geographical determination. Suhrawardi explores the disposition and mental roots of human in the temperament and decides to explain them through allegories and poems.

He believes that human can eventually get rid of the characteristics and properties arisen from temperament and various environments. Suhrawardi thinks of human body as a combination of spirit, limbs, admixtures and fate. Spirit itself is composed of three parts namely vegetative spirit, animal spirit and the soul spirit with the location of the soul spirit being at the triple levels of the brain [7]. For a better understanding of the influence of temperament on soul, it is necessary to introduce the soul faculties or the soul spirits which include common sense, imaginary faculty, illusion faculty, intelligence faculty, and memorial faculty [8].

Description of the first level is that there are two ventricles in the first level of brain: the first ventricle has its throne on water, where someone's ventricle whose temperament is prone

to wetness rests. He explains that the throne of water is made of common sense and its temperament is prone to wetness. Amongst the characteristics of these people is their great perspicacity and forgetfulness. Suhrawardi states: "He/she can solve any problem without saving it in his/her mind". Indeed, saving the subject is one of the positions of the imaginary faculty which is not available to them. In the second ventricle of the first level, a throne of fire is extended and someone's ventricle whose temperament is prone to dryness rests. One of their characteristics is their imaginary faculty. As Suhrawardi explains, "they understand late but once they do they can hardly forget it [7]". In other words, he/she is prone to a dry temperament. Imaginary faculty understands late since it does it sensibly, but when it does, it will hardly ever forget it. One of disadvantages of the imagination power is having useless imaginations so one must not follow his/her imagination forever.

It can be concluded that the common sense is a collective magazine of the five senses which attempts to perceive what is outside of the human body and grows stronger in wet environments. Imaginary faculty is located inside the human body, in the mind, and it could be much more active in a dry environments. Volatile and moving imaginary is due to its fire element. Its slowness and inertia is attributed to its water base. It should be noted that the proximity of these two ventricles

has created an interface with no clear boundary and depending on the side it is inclined towards, it will make the person portray the characters associated with that ventricle [7].

The second or middle level has also two ventricles. The first ventricle has a throne on wind where someone's ventricle whose nature is prone to coldness rests. Residents of this ventricle are closer to coldness with the illusion faculty being dominant in them. Thus, anyone who tends towards cold temperament will also have illusion prevalently and will be incapable of intellectual understanding. For example, the people of Turkestan that has a cold climate have high illusion faculty and are unable to understand intelligences. The disadvantages of this kind of temperament are telling lies, accusing and talking nonsense. The second ventricle of the middle level has a throne on steam and someone's ventricle whose temperament is prone to heat rests there. He/she has imagination faculty. Steam has two functions since it is composed of both fire and water. One is made of water and sensational understanding with common sense while the other is composed of fire and imaginary faculty. The temperament which tends to heat is the imagination faculty in its position [7].

The expected drawback in this temperament is its proximity with the coldness ventricle and empathy with illusion. Once this happens, the individual will employ people to prevent them from intellectual understanding. Therefore, the temperaments of the second level are looking for understanding the intelligences which oscillate between illusion and intelligence when tended toward coldness or hotness. Natural understandings were considered within the two ventricles of the first level, which are placed lower than the abstract understandings of the second level.

The last level has one ventricle. "A throne of soil is extended and someone's ventricle whose temperament is close to equilibrium with his/her thoughts being dominant rests there [7]". The third and the last level of brain is the place of memory which is located at the highest position of human understanding (Table 3).

It can be clearly seen that different natures and climates have some characteristics and tempers for disposition of human being which are classified in a hierarchical structure including

common sense, imaginary, illusion, imagination and memory. It seems that the first level, dryer climate, which includes the superficial understandings, will produce stronger imaginary while the second level, the hotter climates, in which abstract human understandings are started, will make imagination faculty stronger. As a result, hotness and dryness will support "imaginary and imagination" while coldness and wetness will support "illusion and common sense" on the other hand; however, the intensity of hotness and dryness should not exceed general equilibrium which is known as the base performance of though faculty.

7. Climate and disposition from the viewpoint of Ibn-Arabi in gnosis

In order to study the influence of climate on disposition and human moods, one must refer to "the cycle of reasons of differences" which has been mentioned by Ibn-arabi in Marifat (Knowledge) chapter of his valuable book called Al-Futūhāt al-Makkiyya. He revolves human on the periphery of this circle in order to express reasons in diversity of the religions, divine relationships, states, times, movements, attentiveness, goals and self-closures [9] (Figure 6).

As can be observed from the diagram above, dispositions are subsets of human states which are in relation to times,

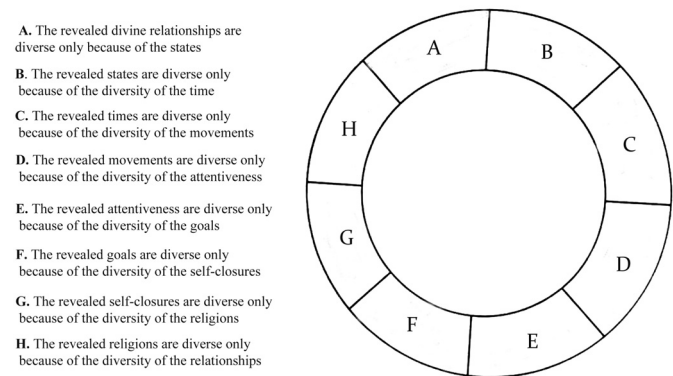


Fig. 6. The circle of religious diversity

Table 3. Suhrawardi classifies different temperaments in three levels and five ventricles. Each of these temperaments and climates are related to each other. This causes one of their faculties to perform stronger in this climate

	Temperament	Equilibrium	
3 rd level of brain	Natural element	Soil	
	Characteristics	Though faculty	
2 nd level of brain	Temperament	Cold	Hot
	Natural element	Wind	Steam
	Characteristics	Illusion faculty, lying, accusing and talking nonsense	Imagination faculty, memorize document, colloquing, employing people
1 st level of brain	Temperament	Wet	Dry
	Natural element	Water	Fire
	Characteristics	Common sense faculty, great perspicacity, forgetfulness	Imaginary faculty, save perceptions, useless imaginations

movements, attentiveness and the other mentioned factors. These characteristics create climates in various places. Thus, the influence of nature, climate and place on the dispositions and relationships of all creatures, including the mankind, on each one of the eight above mentioned items, appears and all creatures of that region are introduced as the children of that climate.

Ibn-arabi recognizes creation of physical body as combination of four temperaments called black bile, yellow bile, phlegm and blood. He argues that God has devised a heavenly faculty in these quadruplet admixtures whose influences are obvious in the body created from them. Therefore, if the admixtures in their observable bodies tend to equilibrium or very close to it, it will lead to the appearance of good features in the human and his/her disposition, but if the admixtures are not in equilibrium, to the extent of its deviation, some disorders in the body will be produced in addition to some improper characteristics in the soul and disposition [10].

He hoped to treat the body and the disposition through exercise and applying science as useful tools for treating any bad quality. He goes a step further and calls habit the fifth nature which influences the main nature [10]. According to the current interpretation, continuing a state and accustoming a creature will change its characteristics to the natural and intrinsic traits of it; experimental scientists have several examples of that.

Temperament which is mentioned in the works of Ibn-arabi is composed of four principles and is based on “hotness and coldness” as active and “wetness and dryness” as passive. With respect to Ibn-arabi, hotness and coldness, and wetness and dryness are natural mothers [10] which are characterized

by life (hotness), knowledge (coldness), will (dryness) and omnipotence (wetness) [10]. Therefore, merging these principles the bases will produce climates and temperaments of the types: “hot and dry”, “hot and wet”, “cold and dry”, and “cold and wet”.

From the viewpoint of Ibn-arabi, dispositions and behaviors arisen from the combination of principles and admixtures create constant and invariable characteristics in human beings. He considers it to be the cause of material, intrinsic and special temperament of an individual or a creature [10] (Table 4).

He states that: “The Arabic word 'Akhlaq' is the plural of 'Khuluq', which mean both the character and the character trait. The word 'Kholuq' is used twice in the holy Qoran and repeatedly in 'Hadith' (often in plural). It is separated only by pronunciation (not in the way it is written) from the very word 'Khuluq' which is connected with 'Khalq', which is to say that character, is rooted in creation or in actual nature of things [11]”. Human character traits are no different from anything else. They also can never be absolutely praiseworthy or absolutely blameworthy. Rather, they are conditioned by the situations within which people are placed. Hence, if the situations change in an appropriate way, character trait will no longer be called “base” but “noble”, even though the exact same qualities are manifesting themselves. He points out the situational nature of ethic while explaining how the five rulings of the Shariah –obligatory, recommended, indifferent, reprehensible, and forbidden- come to be applied to things and activities [11].

Taking into account the points noticed by Ibn-arabi, it can be concluded that existence of dispositions (character traits) are determinative for human being, but the way they are used in accordance to the human will and authority varies.

Table 4. Four main bases extracted from the thoughts of Ibn'Arabi. Marriage of them will create four types of natures and elements. Each of the bases is also attributed to characters and self-disclosures. He has also classified month of the year according to the natures into four parts. A summary of the viewpoint of Ibn-Arabi about quadruplet temperaments

		Active	Natural fathers (superior world)			
Passive	principles of temperament	hotness (life)	coldness (knowledge)			
			Natural mothers (inferior world)	Wetness (omnipotence)	Hot and wet	Cold and wet
Life and omnipotence	Knowledge and omnipotence	Characteristics				
Air	Water	Main element				
June, October, February	July, November, March	Month				
Natural mothers (inferior world)	dryness (will)	Cold and dry	Hot and dry	Climate	Characteristics of the resultant children	
		Life and will	Will and knowledge	Characteristics		
	Fire	Soil	Main element			
	April, August, December	May, September, January	Month			

8. Climate and dispositions in the ideas of Ibn-Khaldun, the Muslim sociologist

Ibn-Khaldun's method in expressing his opinion and his social typology is almost similar to the works of the classic scientists [12]. It is comparative and has an experimental approach in comparison with to the intellectual processes. His research aims to study the communities through his phenomenological vision.

He introduced seven world climates analyzed in relation with the environment and weather influence of each one on human body and psyche in order to present his view on this issue. Ibn-Khaldun believed in geographic determinism in addition to the formation of huge civilizations within mild climates of the Earth throughout the history [13]. He claims that the Earth can be characterized by seven climates: the first and the second climates have hot and tropical weather, while the third to the fifth climates are known by their mild weather and finally, the sixth and the seventh climates are cold. In his viewpoint, residents of the zone with mild weather are much better people due to their environment. People living in Sham, Hejaz, Yemen, Iraq, Iran, India, China, Greece and Rome are located in this climate [14].

Ibn-Khaldun has also implemented some investigations on the influence of weather on the dispositions of the mankind. He observed inconsideration, lightness, freshness and joviality to a large extent in Negros and their living environment [14].

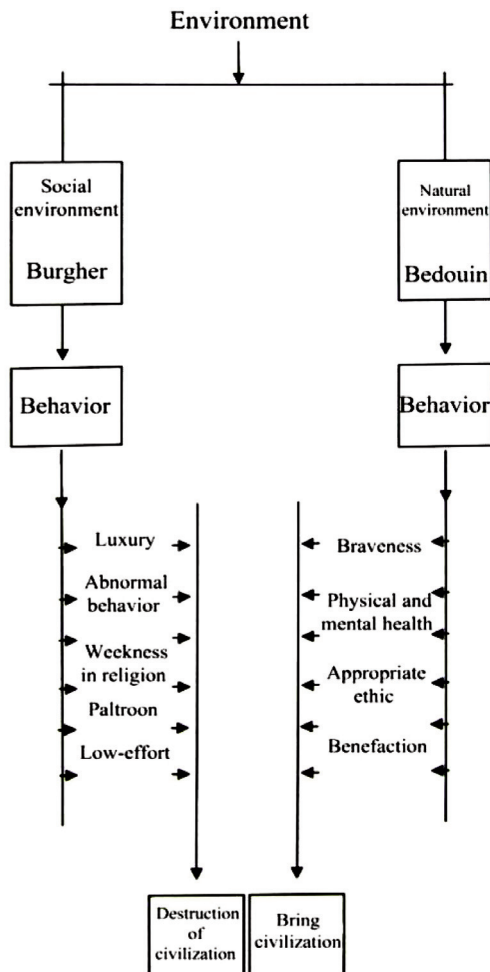


Fig. 7. Influence of environment on disposition from the viewpoint of Ibn-Khaldun

He argues that the reason should be searched in the influence of temperature and temperament interactions on the human body. Residents of hot and dry deserts, who suffer from lack of food, are known to be much healthier physically and psychologically than the wealthy resident of the flat plains. He states that: "Bedouins are healthier and brighter than the urban people; they have more beautiful faces and their minds The Arabs of the desert are the worst in lack of any beliefs and hypocrisy, and most fitted to be in ignorance of the command which Allah hath sent down to his Messenger... But some of the desert Arabs believe in Allah and the Judgment Day, and look on their payments as pious gifts bringing them nearer to Allah and obtaining the prayers of the Messenger" are much readier to learn and achieve knowledge" [14], according to the Holy Quran: "[15].

Thus, it can be said that these people are prone to atheism and disobedience more than others, because they live far from the civilized societies and the modern values such as science and politesse. This group is much cruder, more obdurate and hard tempered than other groups and some of them believe in God and worship it [16].

Therefore, the influence of desert on the disposition and behavior is not as severe as discussed by Ibn-Khaldun. Finally, it can be concluded that he introduces people who live in mild climates and, especially, residents of hot and dry deserts as perfect humans in terms of body, psyche and disposition in comparison to the other climates (Figure 7) [12].

9. Conclusions on the viewpoints of Islamic philosophers and scholars (Theoretical discussion)

The majority of the Islamic scholars have noticed the influence of temperament, nature and the type of creation on human dispositions, and they have explained it as a deterministic issue. However, they recognize the role of human will and authority in their method of application and presentation that would make them variable. Therefore, they have identified the existence of disposition and the influence of climate and environment on it as a deterministic fact while admitting the role of human will and treatment in its application and behavior. On the other hand, they know religion as a moderator of environmental pertinences, so ethic has two bases, natural (disposition) and divine (character traits of the God).

According to this study, disposition used to have a natural base, so human transcendence required its modification based on character traits of the God. In other words, ethics had a posteriori nature and was a product of nature at first but later it required to be modified on the basis of a priori divine principles.

In relation to the pertinences that various climates have on human disposition and behavior, the role of environmental affordance and facilities affected by different weathers is worth to note. It seems that by increasing the environmental affordance, human affordance and sufficiency will decreases and there would be some contexts for moral deviation; inversely, by decreasing the environmental affordance, then human affordance and motivation will be increased towards the ethical evolution. Therefore, hot and dry climate is more potentially prone to the development of moral faculty. This is strongly confirmed by the findings of some religious studies.

10. Implications for the environmental design (Physical issues)

Taking into account the dispositional factors, any climate can be usable from material and moral identification dimension of any place. From the material aspect, physical and behavioral consistency creates special identity-physical affordances in the design language. From the moral aspect, the creation of various characters, tastes and styles will lead to differences in the design language. It should be noted that the items below are just proposed for better understanding of the previously discussed issues, so their scientific and experimental proof would be quite beyond the scope of an article.

10.1. Introversion in hot and dry climates and extroversion in wet climates

Prior to this, ideas from philosopher such as Ibn-Sina and Suhrawardi indicated that dryness can act to support the imagination and may produce an introvert identity whereas wetness may create an extrovert identity by transmitting water specifications such as formability and variation (The effects of the physical introversion and extroversion of architecture on the introversion and extroversion tendencies of the identity. To demonstrate samples and instances of this relation is much easier than proving it the other way round).

For example, architectures of hot and dry climates have mainly used static, uniform, isotropic and aloof forms which lead to the introversion of architecture and identity. The best manifestation of this approach can be observed in the Islamic architecture. Thereby, the residential textures of the Islamic cities are composed of labyrinthine spaces [3]. Houses in this pattern of architecture and urbanism have internal spaces with vast areas linked to the exterior spaces surrounded by the neighborhood walls. Walls are built so high that they have blocked the visions of all the windows [17].

The fact that a body of architecture is introverted, firstly, could be attributed to the climate requirements, but it can gradually create a basis for the introversion dispositional and behavioral culture. At the same time, an introvert individual likes such architecture since being in the climate of extroversion can meet these controversial human's environmental needs by creating equilibrium among the needs. Thus, it seems that the climate factors have been responsible for the initial construction of introverted and extroverted houses, although some other elements, including cultural and religious factors, have intensified them in the course of time. Prior to being modified by architecture, introversion involved concepts and meanings of being self-contained, tendency toward internal tempers and avoiding the open expression of the tempers [18] (Figure. 8, 9).

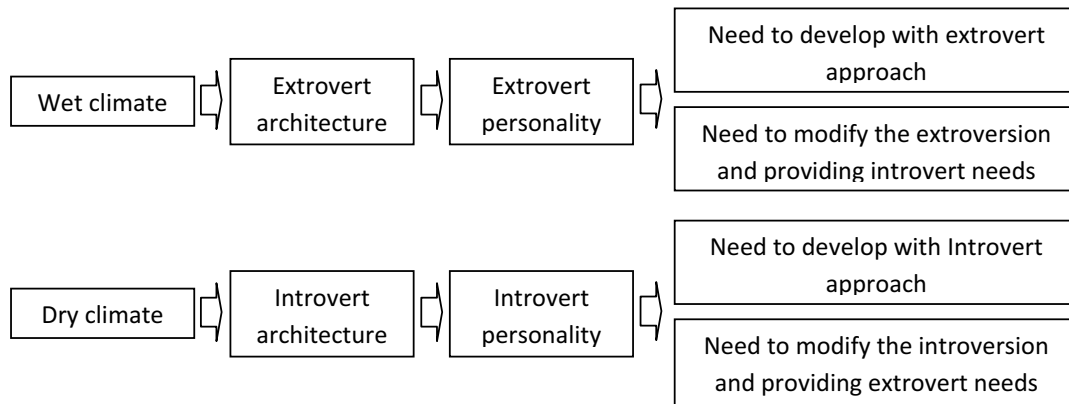


Fig. 8. Mutual interaction of wet and dry climates on the introversion and extroversion of architecture as well as temperament and identity of human being



Fig. 9. Extroversion in wet climates (One of the villages in Māzandarān) - Introversion in hot and dry textures

10.2. Pure geometry, calm Color and deep signs (symbol) in cold, hot and dry climates versus topological geometry, sharp color and attractive signs in wet climates

Two types of calm and emotional tastes can be seen when studying different nations' arts. For examples, instances of emotional decoration and geometry can be observed in eastern countries such as India and Pakistan while there is a significant calmness in the deserts of central Iran and Saudi Arabia (the birth place of Islam). In this field, some research in relation to the colored spectrum in the four main elements of the nature namely air (hot and wet), fire (hot and dry), soil (cold and dry) and water (cold and wet) has been done whose results indicated that water occupies much wider spectrum of colors than other natural elements [19].

Art nouveau architecture can be nominated in recent architecture as an instance arisen from the northern wet and cold climates which is full of variety and emotion of color in architecture, while pure colors of light, vegetation and water, which represent the goal of man's desert voyage, are applied to the architecture of desert cities [3]. For the Islamic architectural styles of Iran, two styles of Razi and Isfahani can

be compared; the former is mono-colored while the latter is multi-colored. Cultural and climate reasons have been noticed in their analysis. The origins of Razi's course can be found in hot and dry lands whereas Isfahan course has its origin in the mild weather of the city of Isfahan [20].

Yorg Kurt, Grutter pays attention to the influence of the cultural, social and personality factors in the definition of the colors. He believes that according to the implemented experiments, color plays a much more important role than form and geometry in influencing children's mind. Extroverts pay more attention to the color rather than introverts [21]. Philosophical root causes of this issue have been much pronounced in the discussed philosophical thoughts. Calmness, stableness and constant dominating the hot and dry temperament does not let excitement in life in the presence of energetic and sharp colors since freshness, dynamism and variety are characteristics of wet temperaments. Thus, both hot and cold tempers may tend toward their alternative color existing in the target climate and weather conditions. However, this tendency is just mono-colored, opaque and emotionless whereas wet climate has fresh and live colors with high contrasts (Figure. 10, 11).

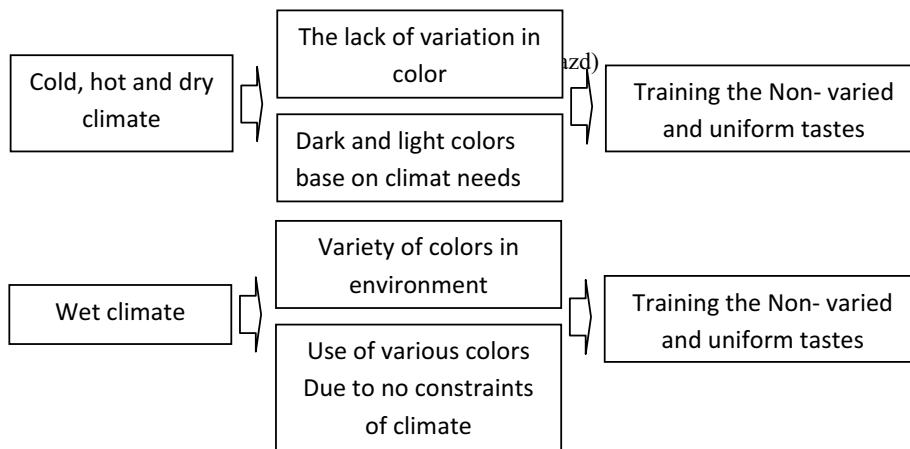


Fig. 10. Mutual interaction of wet, dry, cold and hot climates on color of environment and Taste of human color



Fig. 11. Influences of temperaments and climates on the colors of environment and color tastes of human beings (Abdul-Gaffoor mosque in Singapore and Sheikh Zayed mosque in Abu Dhabi)

This issue has also been reflected in the clothing of the traditional societies. Wet climate regions such as India wear clothes in varied and exciting colors while people living in regions with hot and dry climates are characterized by their plain light colored clothes.

10.3. Abstraction in hot and dry climates versus clearness and assertiveness (realism) in wet climates

There has been lots of philosophical discussions on the high faculty of imagination in hot and dry climates versus the clearness and decreased faculty of imagination in wet climates. In dry regions, it is common to observe a kind of abstraction, intellectual symbolism and conceptual imagination in various areas of art.

Even symbolic religious and holy features in Asian and African countries are full of separation (abstraction) in dry and analogy (realism) in wet regions (e.g., compare African shrines with Indian ones). In this context, the architecture of the hot and dry climates avoids the statuesque appearance

and tends to dematerialize and decorate the spaces with intricate geometrical webs while in wet or romantic climates constructions are naturally shaped [3]. It seems that there are different public tastes in these two regions regarding this dominant basis of designing; it thus needs to be modified to some extent.

In other words, although wet and cold environments do not have a tendency towards the abstract and imaginative symbolism, but since promoting imagination is required for the moral development and growth of human kind, this tendency must be gradually deployed in the environmental influences using adequate strategies (Figure. 12, 13).

10.4. Emphasis on centrality of identity in hot and dry regions and freedom of identity in wet regions

Centrality of identity has two explanations; one is about the body and the other about the temperament. In physical terms, dryness will cause stability in the body of architecture and

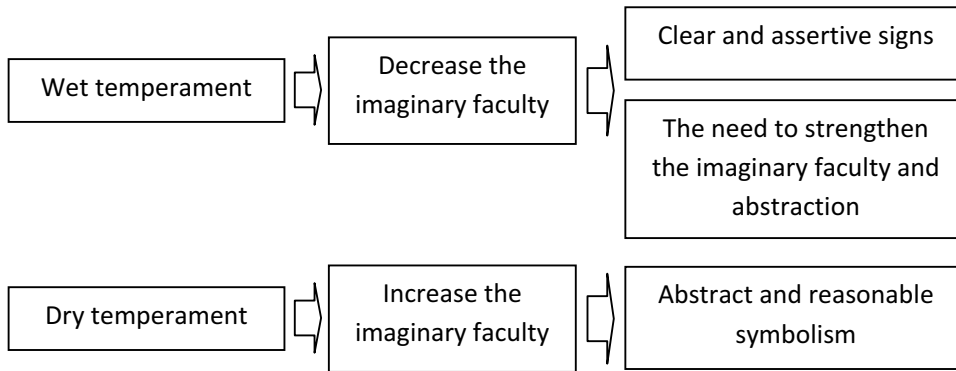


Fig. 12. Influence of temperament and wet/dry climate on imagination power and assertiveness

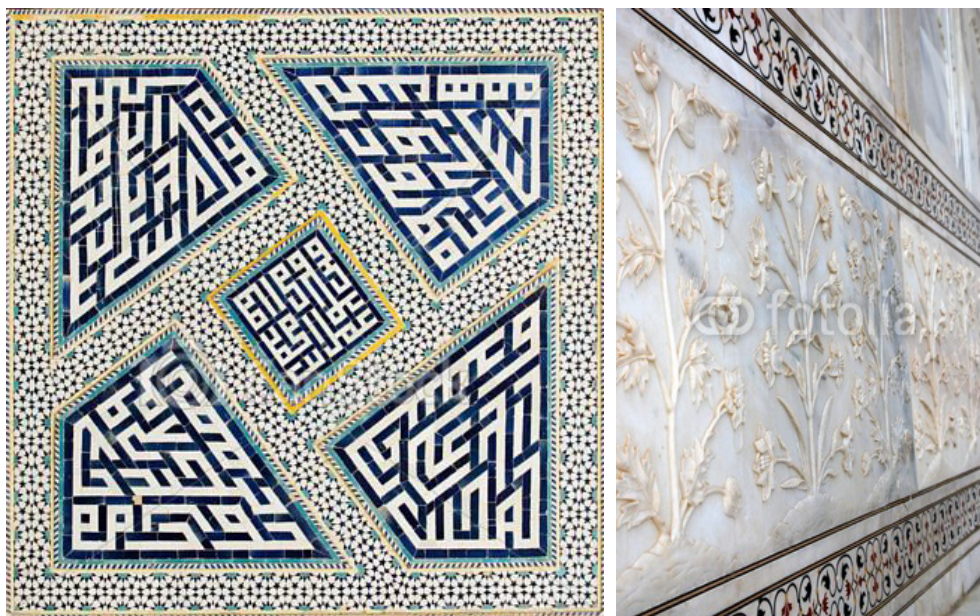


Fig. 13. The imagination power has adopted more of an abstraction state within dry regions and more of a realistic state within wet regions (Ornament of mosques in Iran with hot and dry climate and India with wet climate). (74)

urbanism, while the survival of old architecture will lead to zealotry of identity. On the other hand, wetness will make old architecture unstable and the ruin of the architectural constructions will diminish identity sensitivity.

This principle goes along with introversion and extroversion principles; given the centrality tendencies and the closed vision of people in hot and dry regions, there always is a sense of enclosure, density and limitedness in their architecture. On the other hand, the people from wet climates have little sensitivity toward their identities and are rather free to expand them. Therefore, while people living in hot, dry and cold regions would save their history with much sensitivity, the people from wet regions, due to their additional personality characteristics, have little tendency to save their identity .

Besides, according to the philosophical bases, since wetness and specifically water has qualities like formability, freeness and fluidness, the wet-tempered people have more compatibility and variability. In contrast to the wet temper, the dry temper (either cold or hot) has stable, constant and static properties, which are important in supporting the sense of identity (Figure. 14, 15).

10.5. Limitedness, density and contraction in hot and dry climates versus freedom, openness and expansion in wet climates

Dry climates either cold or hot lead to a kind of isolation from the environment, density and physical constriction. In wet areas, on the other hand, architecture tries to benefit from and expand into the nature. This characteristic is represented in the ratio of open to the enclosed space in architecture and urbanism and has impacts on changing the concept of territory and its boundaries. Based on some studies by Edward Hall in his book called “The Hidden Dimension”, the difference of territory between Arab (hot and dry climate) and English people (cold and wet climate) is discussed. Arabs have a very small territory while the English people consider even getting close to their territory to be a violation of their privacy [21]. Based on the results obtained from the experiments, Arabs should always live in a culturally consistent behavioral and perpetual cycle in an environment of high density. This is because of the constant constraints of the desert and the massive density of population in Arabian cities like Cairo, Beirut and Damascus. This situation is unbearable for almost many European residents [17] (Figure. 16, 17).

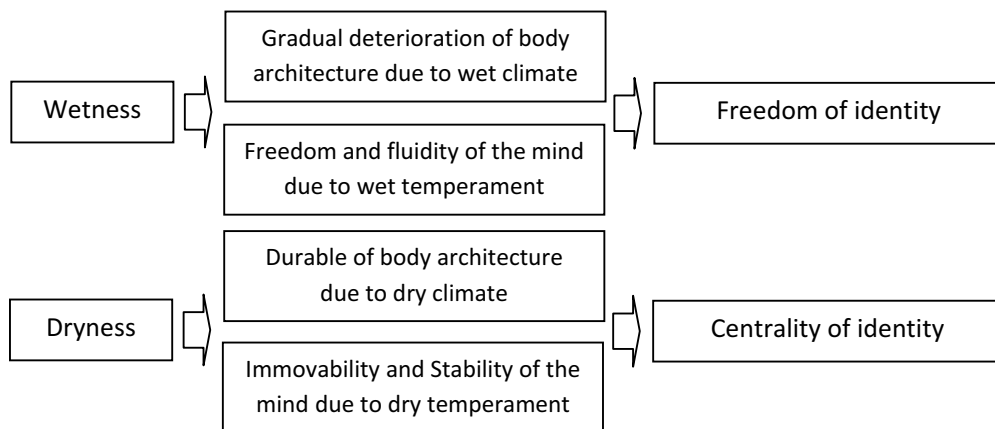


Fig. 14. Centrality of identity in hot and dry regions vs. freedom of identity in mild regions



Fig. 15. Emphasis on centrality of identity in hot and dry regions (Religious ceremonies in the City of Taft dating back several hundred years)

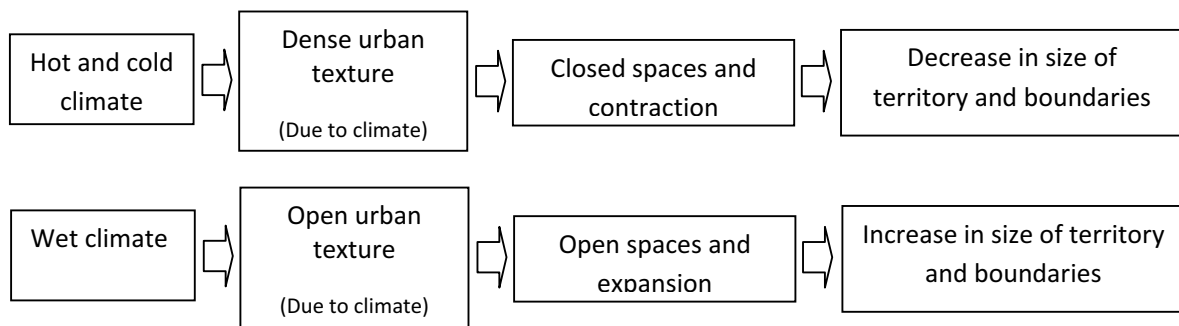


Fig. 16. Influences of hot, cold and wet temperaments and climates in urban texture and size of territory and boundaries



Fig. 17. Open urban texture in wet climate (Māzandarān texture) and dense urban texture in hot climate (Historical texture of Yazd)

11. Conclusion

Most of the studies in environmental psychology examine the experimental parameters of the environment on human psyche in their analysis of the relationships between environment and personality. Few studies can be found on the influences of the personality parameters on the environmental characteristics. The existing studies have mainly focused on personality typology with multiple indexes and have obtained limited experimental results in the field of environment design. The ancient doctrine of philosophical-gnosis speaks about the human temperaments and extracts bases and types of temperament from ontology. The present work examined the aspects of personality and disposition from the viewpoints of phenomenological theory of Genius Loci and Islamic scholars and discussed the implications of the results in designing the environment. Although these bases have been widely applied in the old architecture and urbanism, they have been completely neglected in recent studies and thus need to be thoroughly explored. Despite the fact that this line of research is only in its period of infancy, it can open new horizons for the study of the personality characteristics of disposition-climate issues and lead to the development of strategies and principles for climate design, not only for the sake of physical comfort but also for supplying the psychological and spiritual needs in any temperament and climate. Temperament depends on climate; disposition is the product of temperament; personality

is product of disposition; and behavior is the product of personality and human will. The physical characteristics of architecture are the product of both climate and behavior. Disposition and temperament makes Good basis for the extraction of common design principles, from both the climate and the behavior, and due to two Islamic philosophy and phenomenology. We can found design principles in various climates by disposition and temperament study. This Article extracts and introduces five above principles based on the mentioned foundations.

It seems that, these principles are well known to their traditional environment and urban or architectural spaces were shaped based on this understanding. Yet, for us, this is only the beginning for an extensive research on each of these calmative dispositions or the above mentioned design principles in order to put them into practice.

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