Statistical Analysis of Environmental Elements in Manuchihris Poems

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Abstract: This study takes a step in this direction through the analysis of the poetic works of Manuchihri Damghani, one of the great naturalist poets of the Khorasani style, behaviors that protect the environment and ensure natural sustainability. Ten main categories and their subsets characterized according to their environmental importance. All poems from Manuchihri's collection that had at least one of these environmental elements were statistically analyzed. In nearly all of Manuchihri's verses there was at least one of the environmental elements, showing his particular attention towards nature and the environment. The most significant environmental elements found were minerals, which shows his familiarity with flowers and trees. The importance of rain and water as the main elements of growth and freshness in nature were clearly presented, showing the role of these environmentally vital elements in the formation of this poet's thoughts. Manuchihri's particular focus on flowers and their parts and his knowledge about various types of flowers have created a wonderful picture of nature in his collection. Significant differences (p<0.05) between the ten main natural categories and between the subsets of any given category were found.

Keywords: Poem, Khorasani style, environmental elements, Manuchihri, sustainable development, culture

INTRODUCTION

The natural environment is necessary for the existence of present and future generations (Bogner et al., 2008; Brainard and Brislen, 2007) and has provided all the basic needs of human societies throughout history (Smith and Carnus, 2008). Rapid increases in the number of industries, new technologies that exploit fragile natural resources and industrial contamination of the environment have had deleterious effects on nature (Hossain et al., 2008; Wilkins, 2008). If urgent action is not taken, humans unsustainable use of natural resources will result in total disaster (Gopalakrishnan and Okada, 2007; Hales et al., 2007; Smucker and Wisner, 2008). Therefore, environmental protection is currently one of the main necessities of human life (Sesli et al., 2009; Wang et al., 2008; Zhang and Wen, 2008).

A society's poetry and literature are the best reflection of its traditions, opinions and beliefs (Foster and Freeman, 2008). The language used in poetry and literature is related to human sentiments and hence has a basic role in different subjects (Austin and Claassen, 2008; Newberry and Pachet, 2008; Yan, 2008). Through sentiments, imagery and poetic literature, the poet can fundamentally change society towards a better culture (Foster and Freeman, 2008). It has been shown that cultural shifts towards environmental protection can

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be best achieved though imagery language and can even be passed on to subsequent generations (Brainard and Brislen, 2007; Dinpanah and Lashgarara, 2008; Junges and Selli, 2008; Wade et al., 2008).

Persian literature and poetry have deep roots in Iranian culture going back thousands of years (Yahaggi, 1996) and have always had strong relationships with the environment and environmental elements, such as flowers, plants, birds and animals. The main formative components of poetic imagination have been artistically expressed by poets. The hearts of naturalist poets beat with nature and life. Their innovative pictures of the manifestations and elements of nature can inspire fresh attitudes and also motivate and reinforce responsibility towards environmental protection (Selden, 1989). Even poems with lyrical and lovesick themes and love figures have some natural elements, such as myrtle, willow, cypress and fruits (Asghary, 1997).

The Persian poet Manuchihri Damghani was born in the first half of the Iranian calendar and died in 435 A.H. He has been nominated as one of the greatest poets of Persian history and also as the greatest naturalist poet (Yahaggi, 1996). He had a special familiarity with nature and environmental elements and most of his poetic experiences, similes, metaphors and poetic imagery components came from nature and its elements. His descriptive artifice, disposition and highly poetic style, mixed with pure poetic feelings and sentiments, created beautiful pictures, particularly in detailed expressions of these themes (Asghary, 1997). Hence, this great poet has been considered in this debate and essay. In this investigation, we examine the environmental elements in Manuchihri’s poems so as to determine his most important environmental elements, i.e., flowers, plants and animals. We examine the relationship of the environment with Persian poetry, focusing on Manuchihri’s poems and determine the extent of their relationship with environmental elements and imagery in order to find suitable tools to change cultural attitudes towards environmental protection.

**MATERIALS AND METHODS**

This study was carried out from 2005 to 2007 at the Green Research Center in Qom, Iran. Entries were categorized into the ten most important environmental elements (heavenly, earthly, water, directions, air, time, fire, plants, animals and minerals) and their related components (Table 1). Manuchihri collection collected from different libraries, compared and the latest edition which published and confirmed by editorial board of academy of culture of Iran selected as the best and comprehensive one. All verses were read one by one by two researchers at the same time, checked for any clue of those mentioned entries. All poems from the poetic collection (Divan) of Manuchihri that had at least one of these environment elements were indexed. An SQL databank was designed and each index (consisting of one verse) was characterized according to its main environmental elements. The incidences of main and secondary entries were determined in each section and in all indices, statistical analyses were done using SPSS (version 13, Michigan, USA) as mentioned (Austin and Claassen, 2008).

**RESULTS**

Of 2815 verses in Manuchihri’s Divan, 2654 (94%) mentioned at least one environmental element. The number of entries in the ten main categories of heavenly, earthly, water, time, directions, fire, minerals, plants, birds and animals was 300, 165, 219, 147, 358, 39, 139, 1279,
Table 1: Main environmental categories and their secondary elements used in this study to explore Manuchihr’s poetic collection

<table>
<thead>
<tr>
<th>Main category</th>
<th>Secondary elements</th>
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</thead>
<tbody>
<tr>
<td>The heavenly</td>
<td>Heaven and its expressions: heaven, firmament, garden (firmament), green kilib, green sea; celestial imagery and orders and astronomical terms: celestial imagery, stars, moon, sun, eclipse of the sun, sunrise, moonlight, star, meteor, planet, star, fixed star, heavenly descent: rain, snow, hail, fog; rain and related subjects: cloud, nebula, thunder</td>
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<td>The earthly</td>
<td>Thunderbolt, bow and rainbow, rain bow; Earth and its expressions: Earth, soil, sphere; minerals and precious stone types: pearl, emerald, ruby, gold, silver, mine, gem, treasure; mountains and related subjects: mountain, valley, steep, hill, stone, rock, descent; desert and related subjects: seven climates, country names, city names, village names; earthquakes and related subjects: earthquake, earthquake forces</td>
</tr>
<tr>
<td>Water</td>
<td>Water and its expressions: mirage, water–river, life-liquid boiling and flowing places of water, flood, river, stream, spring, brook, pit, subterranean, drain, sea, lake, pool, river basin, tide, wale, whirlpool, sea drop, dew, beach</td>
</tr>
<tr>
<td>Directions</td>
<td>West, east, north, south, sunrise, sunset</td>
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<tr>
<td>Air</td>
<td>Air and its expressions and synonyms: air, wind; air states: storm, breeze, cold, warm, dust, whirlwind; wind types: zephyr, hurricane, cold wind, north wind</td>
</tr>
<tr>
<td>Time</td>
<td>Time and general divisions: times, year, month, week; time and partial divisions: morning time, noon, night, day, dawn, evening, early lunch, nocturnal, hour, early pray, between prayers; seasons and months: spring, autumn, winter, summer; celebration and festivals: Nowroz (Iranian celebration day), Islamic celebrations (Eid), sad, century</td>
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<tr>
<td>Fire</td>
<td>Fire and its expressions: fire, volcano; burning material: oil, tar, coal, candle, wax, firearms, sulfur, match; tiny fire: spark, rubbers, flame, single, temperature; fire manifestations: light, shot, ray, beam, hot, brightness, shade, ashes, smoke</td>
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<td>Plants</td>
<td>Garden and its expressions: rose garden, garden, plain, meadow, lawn, grass plot; trees and their components: stem, root, branch, root; flower types and their components: flower, leaf, thorn, blossom, petal; rest plants: lawn, grass plot, thorn, fur, Mogollan, poppy shell, reed, bamboo</td>
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<td>Animals</td>
<td>Marines and its belongings: fish, crocodile, coral, shell, pearl; birds and their belongings: beast, mount, quadrapod, hair, skin, wool, ivory, flock; fierce animals and their belongings: fierce animal, carnivorous, dog, cat; insects: mosquito, ant, butterfly, bee, spider, rodents: mice, grey squirrel, sable, fur; reptiles: snake, lizard, chamelon, sun worshipper, scorpion, viper; mythical creatures: dragon, Simorgh, devil; the voices of animals: neighing, roaring</td>
</tr>
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<td>Minerals</td>
<td>Clothing: shoe, clothing, hat, pillow, veil, chamelon, fur, belt, curtain; jewelry: gold, silver, crown, diadem, bracelet, yare, taw, signet; writing tools: pen, book, note book, ink, head band; war tools: sword, dagger, arrow, bow, small arrow, mail, lasso, chin, iron collar, rope, shield, trumpet, flag, banner, mace, vessels and tools: pot, lamp, cup, bowl-cup, urinal; belt; transporting tools: camel litter, ship, nave, throne, boat; perfumes: breath odor, sweet musk, ambergris, compound, perfume, aloes wood, camphor, rose water, perfume; edibles: edible types and drinks, wine, poison, antitoxin, mole, toxin, elixir, antidote, bread, morsel, drink, bade (wine), ray; places: house, palace, mansion, bridge, altar, court, lane, way, idol temple, inn, veranda, porch, oven, gate, parish; make-up tools: rouge, white powder, gold foil, henna, rose-colored, gaze (rouge); play and toys: play and toys, gambling, chess, elephant, flag, checkmated, check, play thing, play; notes: music tunes, note, string, tune, instrument, sax (musical instrument), guitar; color and its belonging: yellow, red, musk, scented, green, violet, blue; measurement units: meter, parasang (unit of length equal to 6.2 km), mile, gannnt</td>
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799, 488, respectively (Fig. 1). In the heavenly category, constellation was most frequent (130) and heavenly descents the least (40), while 80 cases of rain and related subjects and 50 cases of heaven and its expressions were found. In the main category of the earthly, the most frequent components were minerals (62), the least frequent were stones (5), 59 verses related to mountains, 27 to deserts and related subjects and 16 to the earth and its expressions.

In the main category of water, 149 occurrences were related to water and its expressions, 19 to the boiling and flowing of water, 24 to the sea and related subjects, 26 to tiny water sources (droplets, dew) and 1 to each to the dryness related to the sea, such as a beach or island. In the air category, almost 90% (133) of verses related to air and its explanation, 8% (12) to the air states and about 3% (5) to wind types. 310 entries related to time and its general divisions (such as fortune, time, year), 94 related to time and its partial divisions (such as morning, night and day), 60 related to seasons and months and 35 related to festivals and feasts. There were a total of 39 entries in the directions category: 6 of sunset,
7 of sunrise, 2 of North, 4 of West and 20 of East. In the fire category there were a total of 139 cases, of which 107 were of fire expressions, 19 of fire manifestations, 10 of burning materials and 3 of tiny fires.

In the minerals category, transport had the most entries (430) and measuring tools had the least (3). There were 185 cases of perfumes, 180 of places and roads, 172 of edibles, 145 of vessels and tools, 11 of worship instruments, 78 of war tools, 56 of colors, 30 of curtains and musical tunes, 29 of clothing, 20 of play and toys, 16 of jewelry, 13 of writing tools and 7 of make-up tools.

A total of 799 entries in the plants category were found, with the highest number (315) related to expressions of flowers, 115 of garden and 61 in subcategories. Also in this collection were bower (59), meadow, desert and plain (33), tree and forest (21) and grass (90).

A total of 103 cases were of plant components: 25 of leaves of trees and flowers and a kind of thorny bush (Mogilan). Among flower types, tulip and its species such as Naman tulip and self-grown tulip were most frequent (about 64 cases), then jasmine (51), narcissus (30), violet (19), lily and free lily (13), hyacinth, sweet brier, yellow flower and red flower (10), purple (9), sweet basil and auspicious (7), saffron (6), double-faced flower (5), wild basil (5), jonquil (4) and other cases in further subcategories. A total of 150 entries related to trees and small trees, mostly to the grape tree (or vine) (46) and also pomegranate blossoms and its synonyms (24).

A total of 488 entries were of birds and animals, 51 of which were general expressions, 40 of birds (hen and others), 11 of mount, quadrupeds and popular animals, 7 of mythical creatures and the devil, 2 of Simorgh (a fabulous bird) and mythical birds, 5 of dragons and 1 of ghoul. Among birds, nightingale and its synonyms had the most entries (43), then partridge (25), ringdove and turtledove (16), peacock (15), parrot, duck and goose (each with 12 entries), hawk (10), hoopoe (8), pick (7), alum (6), eagle, ostrich, raven (each with 9), dull-yellow partridge and chicken (each with 3) and kite, pigeon and pheasant (each with 2).

Statistical analyses showed significant differences among the ten main categories (p<0.05) and components of each category were also significantly different.

The results showed Manuchihri, a great and well known poet in Iranian culture, had a clear vision toward nature, praised its beauty in his collection (Divan), were familiar with
various definitions and proverbs in Iranian culture related to environment and nature and finally promoted environmental protection in his collection.

DISCUSSION

Persian literature and especially Persian poems have inspired wonderful and profound effects on Iranian culture (Selden, 1989). Considering the extent of Persian art and poetry and their attention towards nature and the environment, clearly Persian art and literature play a major role in environmental protection (Yahaggi, 1996). Therefore, investigations on the wealth of Persian literature, especially the poems of naturalist poets, would be a very appropriate tool for environmental protection. Although, this kind of research has a long history in the literature of other countries, this is the first such publication for Iranian culture and literature (Asghary, 1997; Hales et al., 2007). The main goal of this study is to pave the way for using the wealth of naturalist literature for developing a culture of environmental protection.

Manuchihri is a poet from the Gазnavi period, when poets paid particular attention to nature and the environment (Yahaggi, 1996). The dominant style of this period, called the Khorasani period, is the creation of pictures and imagery deriving inspiration from nature. Poetry from this period, particularly Manuchihri’s poems, very much reflected happy spirits causing prevailing happiness and taking refuge in nature’s skirt and profiting from natural beautiful manifestations (Yahaggi, 1996; Yan, 2008). For instance, Manuchihri expressed a rainy day from different angles. A rain drop falling onto a petal was a special manifestation and created a new picture. Birds fulfill their roles in spring festivals, playing the lute, dalcimer and harp. Flowers also share in the spring festival by pitching a tent and giving the audience flowers and gifts and they provide splendor to the festival with their good smell and beautiful colors and freshness (Heinen and Low, 1992).

This study was conducted for the first time in Iran on this issue (searching all Iranian databases for similar work with no records) and opened up a new window in similar research in Iran, so the findings of this study cannot be related to any other similar work in cultural researches of this country, and they are the first ever findings in this issue and will be used to conduct more researches in this field in near future. The results of this study showed that nearly all of Manuchihri’s collection had at least one of the environmental elements, which shows his special attention to nature and the environment. Most environmental elements related to minerals and he also showed his familiarity with flowers, plants and trees. Perhaps Manuchihri himself was a gardener or his abundant interest made him aware of so much beauty and we can see these effects in his mental reflections. The importance of rain and water as elements that cause growth and freshness in nature is clear in his poetic works and played a vital role influencing his mental patterns. Springs, streams, rivers and seas had a basic role in this poet’s poems as purity, truthfulness and lightness (Yan, 2008; Zhang and Wen, 2008).

This study shows that Manuchihri was completely familiar with flowers and plants of his era and also their components and belongings. Considering the position of tulips in Persian literature as the manifestation of freedom, joy, having cup in hand, bereavement, generosity and martyrdom (Yahaggi, 1996), it is not surprising that the most common flower type in Manuchihri’s poetic works was the tulip and related species, such as the Noman tulip and self-grown tulips.

It is very obvious that Manuchihri paid attention to bird species and especially mythical birds and animals, since we found expressions about birds and animals in one-third of his
verses. Trees and their synonyms were used less than flowers and this issue conveys beauty and variation between flowers and trees. Flowers had a special role in Manuchehr’s poems and his imagery. The poet was attracted to their color, special smell and beauty, manifestations and poetic symbolism, resulting in the creation of beautiful pictures, even if they served as eulogies and themes in elegies.

Among trees and small trees, the grape tree (rose, vine) and its related metaphors were used most frequently in the poetic style of the Khorasani period. This period belongs to the Islamic initial period and yet the beliefs, culture and Iranian festivals stem from the preceding Zoroaster period. The happiness and rejoicing spirit in the poetry of this period continues through in the poetry of the Samani periods (Yahaggi, 1996). After grape and vine, the cypress tree and its relatives were most frequently considered by poets, especially Manuchehr, for their beauty, greenness, solidity and appearance of freedom. The cypress tree was also used in descriptions of love and elegy lyricisms.

Birds were prevalent, particularly the nightingale and its synonyms. In Persian poetic tradition, the nightingale is considered for its beautiful melody. In addition, both the love of flowers and nightingales were frequently used in elegy lyricisms (Yahaggi, 1996). After the nightingale, the partridge, ring dove and turtledove, parrot and mooring, hawk, hoopoe and alum were most frequently considered for their sweet singing and beautiful figures, behavior, type and appropriate rhythmical move and also their special symbolism in Iranian culture. The great variety of birds in different forms in Manuchehr’s poems demonstrated that he was interested in birds and gave them a special position in his poetic imagery (Asghary, 1997; Zhang and Wen, 2008).

Among domesticated animals, the horse and its various types such as rose-colored or bare were most frequently used by poets, reflected in Manuchehr’s poems, showing its importance and special role in life during that period. After the horse, elephants and camels were most considered, also showing the importance and influence of these animals in people’s lives during that period.

Statistical analysis showed significant differences in the ten defined categories. Considering the variety of these entries (consisting of whole environmental components) one can conclude that Manuchehr use of components and environmental elements haven’t been restricted to a special entrance, but rather that he has used from whole components and environmental elements in his poetic works. Even components of each category were statistically different, which shows their wide usage in this poet’s works. This study investigated environmental elements in only two determined poems, but general studies have shown similar results in other poems. Hence, it is appropriate that Manuchehr be considered a naturalist poet.

CONCLUSION

Further statistical analysis may answer many key questions about environmental issues in literary works of naturalist poets in the Khorasani style. For example, in what periods has this poet used the most environmental elements? Which category was most frequent in different parts of this poet’s works? How have the excursion of environmental elements been in the poetic works of this poet? Further information about the precedence and manner in which Manuchehr used environmental elements in his poems will give insight into his interests. We hope this kind of study will open new windows in this field.
REFERENCES


