



# What Makes San Francisco Beautiful?

## Discovering Beauty in Our Surroundings and in Ourselves

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### PREFACE

CitiesBeautiful.org is dedicated to helping everyone learn more about civic beauty, and subsequently having more beautiful experiences. A key contribution is the identification of “common threads” in the theories of beauty of authors from the Ancient Greeks to the present. **What Makes San Francisco Beautiful?** Is an e-book that both summarizes this historic analysis and shows how the analysis results can be applied to helping everyone to appreciate civic beauty more deeply.

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## 1. INTRODUCTION

Herb Caen, the beloved columnist of the *San Francisco Chronicle* for half a century, remarked the year before he died:

“One day if I do go to heaven, I’m going to do what every San Franciscan does who goes to heaven. I’ll look around and say, ‘It ain’t bad, but it ain’t San Francisco.’”

San Francisco is well deserving of its nickname, “Everybody’s Favorite City”, but what makes San Francisco beautiful to each of us? How can we ensure that we are enjoying San Francisco’s beauty to the fullest? Moreover, could some of what we find beautiful about San Francisco also be recognized and appreciated in other cities around the world, including in our home towns? At a deeper level, what do our individual concepts of beauty reveal about our perceptions, our motivations, even our priorities in life?

The answers to these questions are far more profound than most people realize. Dr. Ethel Puffer Howes, professor of aesthetics at Wellesley, Smith and Simmons Colleges in the early Twentieth Century, wrote in her landmark book *The Psychology of Beauty* (Houghton Mifflin, 1905):

“I believe the way is at last opened from the traditional philosophy of aesthetics to a healthy and concrete psychological theory...The beautiful object possesses those qualities which bring the personality into a state of unity and self-completeness.”

Stated differently, we say “Beautiful!” when we experience a spontaneous and deeply appreciative connection between our true selves and our surroundings. Beautiful experiences are not passive; they are participatory – physically, emotionally, intellectually, and soulfully.

**And the goal of this e-book is to provide you with tools to investigate and recognize your personal mind-set toward beauty civic.**

We will proceed in four steps:

- Familiarize ourselves with...
  - the history of the theories of civic beauty, from Ancient Greeks to the present,
  - the anatomy of the human brain, and
  - the relevant works of behavioral psychologists.
- Identify “common threads” that run through the above three disciplines, in order to...
  - assimilate all into a single “Beautiful Schema”, and
  - give names to each of those threads, that is, a “Beautiful Glossary” a.k.a. the “Beautiful Facets”.
- Demonstrate empirically the validity of the Beautiful Schema and Beautiful Facets toward answering the question “What Makes San Francisco Beautiful?”
- Transform the Beautiful Schema and Beautiful Facets into an interactive, personalized test (somewhat like an occupational aptitude test) that *you* can take online at [Cities.Beautiful.org](http://Cities.Beautiful.org) to determine which of the common threads resonate the most with *you* – since indeed “beauty is in the eye of the beholder.”

At the end of this process you will be able to apply your new-found knowledge about what is beautiful to you when exploring the beautiful features of not just San Francisco but all other cities worldwide as well. The [CitiesBeautiful.org](http://CitiesBeautiful.org) website will assist you in your endeavors.

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## 2. HISTORY OF THE THEORIES OF CIVIC BEAUTY

Exhibit 1 on the next page lists the aesthetic philosophers, architects, city planners, psychologists and other important individuals from whose writings the “common threads” have been derived. These individuals are referenced in the next

section of this document, during the development of the Beautiful Schema. A brief biography of each is available in Addendum I.

**EXHIBIT 1**

YEAR	AUTHOR
569 – 475 BC	<b>Pythagoras</b> , <i>Greek Philosopher</i>
427 – 347 BC	<b>Plato</b> , <i>Greek Philosopher</i>
384 – 322 BC	<b>Aristotle</b> , <i>Greek Philosopher</i>
70(?) – 25 BC	<b>Marcus Vitruvius Pollio</b> , <i>Roman Engineer and Architect</i>
1225 – 1274	<b>Thomas Aquinas</b> , <i>Italian Theologian and Philosopher</i>
1694 – 1746	<b>Francis Hutcheson</b> , <i>British Philosopher</i>
1697 – 1764	<b>William Hogarth</b> , <i>English Painter and Printmaker</i>
1711 – 1776	<b>David Hume</b> , <i>Scottish Philosopher</i>
1724 – 1804	<b>Immanuel Kant</b> , <i>German Philosopher</i>
1754 – 1825	<b>Pierre Charles L'Enfant</b> , <i>French and American Architect and Civil Engineer</i>
1770 – 1831	<b>Georg Wilhelm Friedrich Hegel</b> , <i>German Philosopher</i>
1795 – 1821	<b>John Keats</b> , <i>English Poet</i>
1803 – 1882	<b>Ralph Waldo Emerson</b> , <i>American Essayist, Lecturer, and Poet</i>
1842 – 1910	<b>William James</b> , <i>American Philosopher, Psychologist and Academic</i>
1843 – 1903	<b>Camillo Sitte</b> , <i>Austrian Architect, Art Historian, and City Planning Theoretician</i>
1846 – 1912	<b>Daniel Burnham</b> , <i>American Architect and City Planner</i>
1850 – 1928	<b>Ebenezer Howard</b> , <i>British City Planner</i>
1856 – 1924	<b>Louis Sullivan</b> , <i>American Architect</i>
1859 – 1952	<b>John Dewey</b> , <i>American Philosopher, Psychologist and Academic</i>
1865 – 1944	<b>Robert Park</b> , <i>American Sociologist and Academic</i>
1867 – 1959	<b>Frank Lloyd Wright</b> , <i>American Architect and City Planner</i>
1872 – 1950	<b>Ethel Puffer Howes</b> , <i>American Philosopher, Psychologist and Academic</i>
1887 – 1965	<b>Le Corbusier</b> (aka Charles-Édouard Jeanneret), <i>Swiss Architect and City Planner</i>
1895 – 1990	<b>Lewis Mumford</b> , <i>American Historian, Sociologist and Literary Critic</i>
1897 – 1952	<b>Louis Wirth</b> , <i>American Sociologist</i>
1908 – 1970	<b>Abraham Maslow</b> , <i>American Psychologist and Academic</i>
1909 – 2000	<b>James Marston Fitch</b> , <i>American Architect, Preservationist and Academic</i>
1910 – 2005	<b>Edmund Bacon</b> , <i>American City Planner</i>
1913 – 2007	<b>Paul MacLean</b> , <i>American Physician and Neurologist</i>
1916 – 2006	<b>Jane Jacobs</b> , <i>American City Planning Activist</i>
1918 – 1984	<b>Kevin Lynch</b> , <i>American City Planner and Academic</i>
1928 – 2008	<b>Ronald Hepburn</b> , <i>Scottish Philosopher and Academic</i>
1935 – 2004	<b>Oscar Newman</b> , <i>American Architect and City Planner</i>
1940 –	<b>Clayton Alderfer</b> , <i>American Psychologist and Academic</i>
1941 –	<b>Peter Neill</b> , <i>American Preservationist and Academic</i>
1951 –	<b>Eugene Mathes</b> , <i>American Psychologist and Academic</i>
1960 –	<b>Steven Schloeder</b> , <i>American Theologian and Architect</i>
1960 –	<b>Virginia Postrel</b> , <i>American Journalist</i>
1968 –	<b>Jennifer McMahon</b> , <i>Australian Philosopher and Academic</i>
1969 –	<b>Alain De Botton</b> , <i>Swiss/British Architect and Philosopher</i>

Note that all the above commentators are from the Western a.k.a. Occidental traditions. At present CitiesBeautiful.org does not specifically include Eastern a.k.a. Oriental traditions. However, Addendum II provides insights into how Eastern/Oriental perspectives fit into the Beautiful Schema and Beautiful Facets presented later in this document.

**3. DEVELOPMENT OF THE BEAUTIFUL SCHEMA AND BEAUTIFUL FACETS**

As will be explicated during this section, the Beautiful Schema consists of a matrix which brings together three critical sets of factors which allow us to define that which is beautiful:

- The observations of acclaimed philosophers, architects, city planners, etc., over the last 2,600 years – that is, the above list of 40 authors.

- The anatomy of the human brain, providing the biological context for perceiving beauty; and
- The theories of leading behavioral psychologists, who lie at the cross roads of brain and intellect.

Each of these three sets of inputs is explored below, after which all three are combined in the Beautiful Schema. As will be shown, the Beautiful Schema results in 15 Beautiful Facets – that is, 15 categories of civic beauty.

**Observations Of Acclaimed Philosophers, Architects, City Planners, Etc.**

The above 40 aesthetes, architects, planners, psychologists, etc., from Pythagoras to the present, offer a very broad spectrum of theories on the nature of beauty generally and civic beauty specifically. Nevertheless, a number of universal truths concerning beauty -- reoccurring themes, shared attributes, congruent characteristics -- can be identified in those theories, despite the vast differences in times and places, cultures, professions, and so on, of their authors.

The following are eight beautiful universal truths that have been identified, together with supporting evidence drawn from the writings of the 40 authors. Note that the selected excerpts do not constitute all the available evidence, but rather are exemplary for purposes of “connecting the dots.”

**Beauty Is ... Divinity, Perfection, Truth**

The concept of beauty has long been associated with religion. In Italy in the 13<sup>th</sup> century, for example, Saint Thomas Aquinas observed in his *Summa Theologiae*<sup>1</sup> that beauty is not found in biological pleasures, but rather is a characteristic of the divine which we can find on earth. Six hundred years later the American poet and philosopher Ralph Waldo Emerson wrote: “Never lose an opportunity of seeing anything that is beautiful; for beauty is God’s handwriting – a wayside sacrament. Welcome it in every fair face, in every fair sky, in every fair flower, and thank God for it as a cup of blessing.”

Further, the concept has long been more complicated than simply that God equals beauty. In Ancient Greece approximately 2,300 years ago, Plato wrote in the *Symposium*<sup>2</sup> about “The Beautiful” – the unchanging and divine form of beauty that we cannot perceive with our senses but can aspire to discover with our intellect. True beauty for Plato was not just a matter of faith, but something that can be discovered through disciplined training of the mind.

Not incidentally, Plato deserves credit as the source of the adage “Beauty is in the eye of the beholder.” The adage paraphrases this quote from the *Symposium*: “Remember how in that communion only, beholding beauty with the eye of the mind, he will be enabled to bring forth, not images of beauty, but realities (for he has hold not of an image but of a reality), and bringing forth and nourishing true virtue to become the friend of God and be immortal, if mortal man may.”

In Germany in the 18<sup>th</sup> century, Georg Wilhelm Friedrich Hegel embraced a Plato-like view that self-knowledge develops by stages over time, but also believed that the development of the human mind – including art -- is inconceivable without religion. His contemporary, Friedrich Wilhelm Joseph von Schelling, put forth the concept of the Absolute Idealism, in which beauty marks the interface between Self and Nature (the Universe). Hegel and Schelling were adding an introspective viewpoint which might be phrased: “How do I find within me the beauty that is the Universe?”

In the 19<sup>th</sup> century the English poet John Keats, again with an introspective viewpoint but focusing more on this world than the next, wrote two of the most well-known lines in English literature in his *Ode on a Grecian Urn*:

“Beauty is truth, truth beauty – that is all  
Ye know on earth, and all ye need to know.”

The transcendent nature of beauty is of course a topic still discussed today. In recent years, architect and author Steven J. Schloeder has defined architecture as "...the fine art of designing buildings for both the body and soul...a building which not only houses and protects and accommodates the body, our physicality, but one that is intended to nourish our soul with meaning, symbolic content, and beauty.”<sup>3</sup>

Our first beautiful universal truth, then, is that beauty signifies an ideal transcending reality, an ideal frequently associated with spirituality, an ideal within our abilities to pursue on earth.

### **Beauty Is ... Fitness, Purposiveness, Form Follows Function**

"The Beautiful" for Plato was unchanging, an absolute. Though a student of Plato's, Aristotle perceived beauty not to be an absolute but instead relativistic, varying with the object. For example, in the *Rhetoric*<sup>4</sup> Aristotle maintains that a man's beauty changes in meaning as he grows older and takes on different functions: the beautiful young man is a competitive athlete; the beautiful man of middle age is a fearsome warrior; and the beautiful old man is undiminished by age. Aristotle was thus one of the first commentators to say of beauty that "it depends."

Another was William Hogarth, the 17<sup>th</sup> century English painter, printmaker, and author of *The Analysis of Beauty*<sup>5</sup>. In his book Hogarth identifies one of the fundamental artistic and aesthetic principles to be "Fitness." He uses this example: "The race-horse, having all its parts of such dimensions as best fit the purposes of speed, acquires on that account a consistent character of one sort of beauty. To illustrate this, suppose the beautiful head and gracefully-turn'd neck of the war-horse were placed on the shoulders of the race-horse, instead of his own awkward straight one: it would disgust, and deform, instead of adding beauty."

Innumerable other observers have commented on how beautifully adapted are the shapes of plants, animals and other components of the natural environment for fulfilling their everyday purposes. Objects beautifully adapted to their purpose can be found in the manmade world as well. The phrase "form follows function" comes from Louis Sullivan, a major figure in the Chicago School of architecture in the late 19<sup>th</sup> century and mentor to Frank Lloyd Wright. His design creed first appeared in his 1896 essay *The Tall Office Building Artistically Considered*.

Similarly, Le Corbusier, arguably the dominant architect of the 20<sup>th</sup> century, asserted: "A house is a machine for living in...An armchair is a machine for sitting in, and so on."<sup>6</sup> Le Corbusier eschewed ornamentation of any kind, pursuing instead the true nature of any object. Architecturally, true forms were functional geometric shapes.

Thus our second beautiful universal truth is that of beauty emanating from the congruence of an object's physical state and its *raison d'etre*.

### **Beauty Is ... Symmetry, Proportion, Definition**

If Helen of Troy was indeed so beautiful that hers was "the face that launched a thousand ships," most likely her face was remarkably symmetrical. All of us, to varying degrees, have differences between the left side and the right side of our faces; "photograph my good side" has a basis in fact. Studies have shown that these left-right facial differences are imperceptible in men and women considered beautiful.

Pythagoras would have understood the attractiveness of Helen's facial geometry. A mathematician and philosopher who lived in Greece 25 centuries ago (7 centuries after the destruction of Troy), Pythagoras founded a school of philosophy that believes beauty in the world arises from numeric harmonies. That is, underlying the beautiful proportions and orderliness found in nature, music, architecture, etc., are specific mathematical formulations.

Aristotle agreed: "The chief forms of beauty are order and symmetry and definiteness, which the mathematical sciences demonstrate in a special degree."<sup>7</sup> He further commented that "...we often say of good works of art that it is not possible either to take away or to add anything."<sup>8</sup>

Both of Aristotle's observations were echoed by William Hogarth a thousand years later in England. In *The Analysis of Beauty*<sup>9</sup> under the aesthetic principle of "Pleasing Forms," Hogarth says: "If any one should ask, what it is that constitutes a fine-proportion'd human figure? How ready and seemingly decisive is the common answer: a just symmetry and harmony of parts with respect to the whole. Simplicity in composition, or distinctness of parts, is ever to be attended to, as it is one part of beauty."

So far "beauty by the numbers" appears to be unemotional. Immanuel Kant, in Germany at the end of the 18<sup>th</sup> century, explicitly addresses that point. Kant's *Critique of Judgment*<sup>10</sup> is generally acknowledged to be the foundation of modern aesthetic philosophy. The beginning section, "Analytic of the Beautiful," posits that ornamentation, charming colors, or other pleasurable manifestations may attract us to an object but are not the appropriate basis for judging its beauty.

Rather, pure judgment is based on the form of the object, including its spatial and temporal composition. Emotion is extraneous.

Thus our beautiful universal truth is that a beautiful object's components are objectively deducible, harmoniously balanced, and clearly, concisely articulated.

### ***Beauty Is ... Order within Diversity and Complexity***

Why would most people agree that the morning sun highlighting dozens of dew drops and hundreds of strands in a spider web is a beautiful sight? Credit for being the first to answer the question goes to Francis Hutcheson, an 18<sup>th</sup> century Irish philosopher. Hutcheson wrote in *Inquiry into the Origin of Our Ideas of Beauty and Virtue*<sup>11</sup> that beautiful objects are those in which there is "uniformity amidst variety." For "uniformity" he sometimes substituted "regularity" and "order"; for "variety," "diversity" and "complexity." He further observed that objects displaying uniformity amidst variety (regularity within diversity, order within complexity) can be found in nature, art, and mathematics.

Hutcheson's contemporary, William Hogarth, in *The Analysis of Beauty* refers frequently to his fundamental principle of "Variety." For example: "The art of composing well is no more than the art of varying well...Yet when the eye is glutted with a succession of variety, it finds relief in a certain degree of sameness; and even plain space becomes agreeable, and properly introduced, and contrasted with variety, adds to it more variety."<sup>12</sup> Hogarth is thereby adding a twist: ubiquitous variety is not beautiful. Our large spider web offset by empty surroundings is beautiful, but that same spider web in a world consisting entirely of spider webs would not be.

Kant also adds a twist, from his previously cited, seminal *Critique of Judgment*, when he posits that a key component of beauty lies essentially in our recognition of our recognition. That is, we acknowledge the beauty of an object via the feeling of pleasure of the harmony of our abilities and awareness of our mental state. We experience beauty "not as a thought, but as an internal feeling of a purposive state of the mind."

Hutcheson, Hogarth and Kant are all saying that humans find beauty when they can make sense of their surroundings. Explicitly, in the mid-20<sup>th</sup> century Professor Kevin Lynch of the Massachusetts Institute of Technology reached that conclusion while conducting extensive field research on how people perceive the cityscape. In a Boston case study, he found that: "The individual must perceive his environment as an ordered pattern, and is constantly trying to inject order into his surroundings...A distinctive and legible environment heightens the potential depth and intensity of the human experience."<sup>13</sup> Lynch is telling us not only that we not only find "uniformity amidst variety" to be attractive, but also that we actually need it.

As an aside, consider the "uniformity amidst variety" of San Francisco's much admired Victorian neighborhoods. Despite significant differences from one building to the next in three distinct Victorian-era architectural styles (chronologically, Italianate, Second Empire, and Queen Anne), an observer such as Lynch would readily discern and appreciate reoccurring patterns of Bay Windows; for example, the observer would perceive "stick-style" facade ornamentation, standard three-color palettes for the houses known as the Painted Ladies, and so on. Thus, "uniformity amidst variety" can exist at the scale of entire city blocks as well as within a small spider web.

At the macro scale, Edmund Bacon, planning director of Philadelphia from 1949 to 1970 and author of *Design of Cities*<sup>14</sup>, has this overall prescription for making cities more beautiful: "...create strongly articulated nuclei built around beloved landmarks and institutions carefully distributed throughout the residential fabric, to establish powerful architectural imagery and rhythms which extend their influence into the less articulated areas around them." Substitute dew drops for landmarks, and Bacon's prescription has much in common with our initial, sunlit spider web.

Hence the fourth beautiful universal truth is that we find – and even need – beauty by assimilating complex order.

### ***Beauty Is ... Monumental, Inspirational, Majestic***

One of the simplest and most commonplace geometric shapes is the pyramid. Yet the Great Pyramid at Giza has been a breath-taking, beautiful-to-behold sight for more than 4,500 years. Size matters. Why?

Once again *The Analysis of Beauty* is a seminal text, this time for the aesthetic principle William Hogarth labels “Quantity.” He states: “Forms of magnitude, although ill-shaped, will however, on account of their vastness, draw our attention and raise our admiration... Elephants and whales please us with their unwieldy greatness... The robes of state are always made large and full, because they give a grandeur of appearance... In a word, it is quantity which adds greatness to grace.”<sup>15</sup>

Adding “greatness to grace” can also be achieved in urban design. Pierre Charles L'Enfant prepared the baroque plan for Washington, D.C. in 1791, inspired in part by the plan for Versailles. Long avenues, lined with huge neoclassical buildings, intersect at monuments and fountains. Open spaces and panoramas are numerous and vast. The intent is for the entire city to be a magnificent statement.

Magnificence was also a theme of the City Beautiful Movement, which grew out of “the White City” of the World's Columbian Exposition in Chicago in 1893. Daniel Burnham is the architect most associated with the City Beautiful Movement. His most famous quote says it all: “Make no little plans; they have no magic to stir men's blood and probably will themselves not be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will not die.” Though eventually – and arguably unfairly – falling into disfavor, the City Beautiful Movement in fact did not die; among its many legacies is the master plan (also known as the general plan or comprehensive plan) in virtually every U.S. community.

Lewis Mumford helps us complete our august journey from Ancient Egypt to the modern day and on to the future. Mumford was awarded the Presidential Medal of Freedom for his contributions to architectural criticism, American studies, humanism, and technology. In his landmark book *The City in History*<sup>16</sup> he wrote: “When cities were first founded, an old Egyptian scribe tells us, the mission of the founder was to ‘put gods in their shrines.’ The task of the coming city is not essentially different: its mission is to put the highest concerns of man at the center of all his activities.”

The fifth beautiful universal truth is found in the physical representation of those highest concerns, when we confront something majestic, grandiose, colossal.

### ***Beauty Is ... Social Connection, Communal Expression, Cultural Continuity***

The television comedy *Cheers* received greater popular and critical acclaim than almost any other television show in history. One of the major reasons is captured in the lyrics of its theme song: “Sometimes you want to go where everybody knows your name, and they're always glad you came.” *Cheers* personified the beautiful experiences that can emerge from social affinities. Beautiful experiences are not limited to the interactions a person has with objects, but also include interactions with other people.

Cities offer the greatest number of opportunities for such interactions. In the first part of the 20<sup>th</sup> century, sociologists in the United States and in Germany were exploring the linkages between demographics and geography within cities. Persons of similar ethnic, income, educational, and other characteristics, then as now, tend to conglomerate. Robert Park (writing in 1916): “The attraction of the metropolis is due in part to the fact that in the long run every individual finds somewhere among the varied manifestations of city life the sort of environment in which he expands and feels at ease... that bring his innate dispositions to full and free expression.”<sup>17</sup> Hence cities, as embodiments of human preferences and aspirations, are hardly monolithic. Louis Wirth (1938): “The different parts of the city acquire specialized functions, and the city consequently comes to resemble a mosaic of social worlds in which the transition from one to the other is abrupt.”<sup>18</sup> *Cheers* could be viewed as one of the social worlds (albeit tiny) comprising the mosaic called Boston.

People gravitate to the areas of cities where they feel most at home, and thereby help shape those cities. In Austria toward the end of the 19<sup>th</sup> century, Camillo Sitte published one of the most influential textbooks in the history of urban planning. In *City Planning According to Artistic Principles*<sup>19</sup> he argued that urban design should be based on analyses of historic city plans, which exhibit an organic arrangement of buildings, landmarks and monuments that completely complement everyday life. “Anyone who has enjoyed the charms of an ancient city would hardly disagree with this idea of the strong influence of physical setting on the human soul.” People shape cities, and cities in turn shape the people who live there.

Can cities be proactively designed to shape the inhabitants in a specified way? Daniel Burnham and the other leaders of the City Beautiful Movement held that beautiful cities would bring forth better, happier citizens. A hallmark of the movement was the civic center – the finest surviving example of which is San Francisco's. Burnham et al. believed: “The

civic center's beauty would reflect in the souls of the city's inhabitants, inducing order, calm and propriety therein. The citizen's presence in the center, together with other citizens, would strengthen pride in the city and awaken a sense of community with fellow urban dwellers.”<sup>20</sup> Beautiful cities would yield worthy citizens, who presumably would strive to make their cities even more beautiful.

Louis Mumford, again from his masterful book *The City in History*, warns of the perils of *not* pursuing beautiful cities. “If we are to create balanced human beings, capable of entering into worldwide cooperation with all other men of good will – and that is the supreme task of our generation, and the foundation of all its other potential achievements – we must give as much weight to the arousal of the emotions and to the expression of moral and esthetic values as we now give to science, to invention, to practical organization. One without the other is impotent.”

The efficacy and even ethics of proactive design can be controversial, because who's opinion of beauty should dominate? Less controversial is a reactive approach to city planning. In 1961 another of the most influential texts in the history of urban planning was published. Jane Jacobs wrote *The Death and Life of Great American Cities*<sup>21</sup> to reclaim cities for their citizens. “City designers should return to a strategy ennobling both to art and to life: a strategy of illuminating and clarifying life and helping to explain to us its meanings and order...Only intricacy and vitality of use give, to the parts of a city, appropriate structure and shape.” Similarly, again quoting city planner and author Edmund Bacon: “One of the prime purposes of architecture is to heighten the drama of living. Therefore, architecture must provide differentiated spaces for different activities, and it must articulate them in such a way that the emotional content of the particular act of living which takes place in them is reinforced.”<sup>22</sup> If they could be gathered in a single room, all the above commentators would quickly agree that city planners should give greater attention to supporting individual lifestyles and communal cohesion.

As a corollary, such support by city planners not only has spatial dimensions but temporal extensions as well. In 1991, Peter Neill, president of the South Street Seaport Museum in New York City, said in his speech at the National Preservation Conference: “What is historic preservation?...It is an equation between self and history so powerful that it makes us lie down in front of bulldozers, raise toppled statues, salvage old boats.”<sup>23</sup> Social affinity is timeless.

In short, human interactions and the context in which they occur generate beautiful experiences – the sixth beautiful universal truth.

### **Beauty Is ... The Natural Environment**

“I think that I shall never see a poem lovely as a tree...” Written in 1914, Joyce Kilmer's well known poem *Trees* captures the reverence humankind feels toward nature.

The earliest extant book on architecture – and one that has profoundly influenced artists and architects for centuries, including Michelangelo and Da Vinci (per the “Vitruvian Man”) – is *De Architectura* [*On Architecture*], circa 15 BC by the Roman architect and engineer Marcus Vitruvius Pollio. Vitruvius is famous for asserting that a structure must balance three salient qualities: *firmitas, utilitas, venustas* – i.e., solid, useful, beautiful. Vitruvius thought that a timeless notion of beauty could be learnt from the “truth of nature”, that nature's designs were based on universal laws of proportion and symmetry. If a building is to create a sense of *eurythmia* - a graceful and agreeable atmosphere - it is essential that it mirrors these natural laws of harmony and beauty.

Again from the *Critique of Judgment*, Immanuel Kant says that nature, “without our indulging in any refinements of thought, but, simply in our apprehension of it, excites the feeling of the sublime.” In fact, according to Kant we are predisposed (“pre-adapted to our power of judgment”) to find beauty in nature.<sup>24</sup>

Turning from poetry and philosophy to urban design, yet another of the most important texts in city planning history is Ebenezer Howard's *Garden Cities of To-Morrow*. First published in England in 1902, the book calls for relatively small, completely planned communities in suburban and rural areas, permanently surrounded by agricultural land. Ultimately more than 30 communities in England and the United States were built employing Howard's guidelines, including Radburn, New Jersey. His ideas also inspired other highly influential planners including Frederick Law Olmstead, the founder of American landscape architecture.

*Garden Cities of To-Morrow* was published in England when the City Beautiful Movement was gaining momentum in the United States. Though often characterized by its neoclassic architecture, the City Beautiful Movement was not concerned only with the manmade structures. “Reverence for natural beauty and for naturalistic constructivism, its urban



counterpart, stand first in the order of City Beautiful aesthetics...City Beautiful planners typically treated naturalistic parks and parkways as precious assets.”<sup>25</sup> City planners on both sides of the Atlantic Ocean venerated nature.

Frank Lloyd Wright was among them. Beginning in 1934, Wright advocated a utopian cityscape which he called Broadacres. Dwellings, businesses and industry were to be widely scattered throughout a rural setting, essentially completely decentralizing cities, placing man in harmony with nature.

John Dewey, an American academic whose life span closely overlapped with Wright's, became the nation's foremost expert in educational philosophy. Kant says we are pre-adapted to find beauty in nature, and then Dewey tells us why. He argues that the roots of art and beauty are in the “basic vital functions...the biological commonplaces” man shares with “bird and beast.”<sup>26</sup>

Ronald W. Hepburn, another academic but this time Scottish and a couple of generations after Dewey, laid the foundation for a new paradigm for environmental aesthetics. In *Contemporary Aesthetics and the Neglect of Natural Beauty*<sup>27</sup>, he makes the case that aesthetic experiences in the natural world can be as cognitively rich and emotionally rewarding as the best works of art. His version of the poem *Trees* might begin “I know that I shall never see a painting lovelier than a tree...”

Interplay with the natural world thus comprises the seventh beautiful universal truth.

### **Beauty Is ... Stimulation of the Senses**

One of the most historic cemeteries in the world is Pere Lachaise in Paris. Luminaries interred there are diverse indeed, including Molière, Honoré de Balzac, Georges Seurat, Oscar Wilde, Sarah Bernhardt, Marcel Proust, Gertrude Stein, Maria Callas, and Jim Morrison. The graves that consistently have the most flowers, though, are Frédéric Chopin, Georges Bizet, Gioacchino Rossini, and other composers – despite, in some cases, the passage of a century and a half since their deaths. The appeal of music (essentially non-random arrangements of selected sounds) is obviously both universal and highly personal.

Music thereby fulfills the definition of “beautiful” in *Webster's Encyclopedic Unabridged Dictionary of the English Language*: “having qualities that give great pleasure or satisfaction to see, hear, think about, etc.; delighting the senses or mind.”<sup>28</sup> Though some dictionaries emphasize visual stimulation, most dictionaries include all the senses when defining “beautiful.”

The linkage between beauty and the senses in dictionaries and in discourses on aesthetic philosophy can be traced at least as far as David Hume, a Scottish philosopher in the 18<sup>th</sup> century. In his book *Of the Standard of Taste*<sup>29</sup> Hume wrote that anyone can learn to perceive beauty, that is, develop “the mechanism of taste.” Doing so requires overcoming five “defects,” the first of which concerns “delicacy,” described as the ability to perceive the aesthetic ingredients in an object using all five senses. Good taste – recognizing and appreciating beauty – results in part from training all our senses.

A century and a half after *Of the Standard of Taste* was first published, Dr. Ethel Puffer Howes, professor of aesthetics at several Ivy League colleges, wrote her all-encompassing book *The Psychology of Beauty*<sup>30</sup>. After surveying all the literature on beauty up to that time, not only in aesthetic philosophy but also psychology and other germane disciplines, she concludes: “Thus the Nature of Beauty is in the relation of means to an end; the means, the possibilities of stimulation in the motor, visual, auditory, and purely ideal fields; the end, a moment of perfection, of self-complete unity of experience...Beauty is not perfection; but the beauty of an object lies in its permanent possibility of creating the perfect moment.” From Hume to Howe, we find agreement that the search for beauty begins with all the senses.

We also receive agreement six decades later from a pioneer in an entirely different discipline. Dr. James Marston Fitch is best known for establishing the nation's first academic program in restoration and historic preservation at Columbia University's school of architecture. The broad scope of his writings, however, also encompasses environmental psychology, notably the biological underpinnings of aesthetic experiences. Fitch reprimands architects for inadequate attention to all the senses. “The aesthetic enjoyment of an actual building cannot be merely a matter of vision (as most criticism tacitly assumes). It can only be a matter of total sensory perception...Only by manipulating the physical properties of his environment – heat, air, light, color, odor, sound, surface, space – can the architect communicate with his client at all.”<sup>31</sup>

Similarly, once more quoting city planner Edmund Bacon in his book *Design of Cities*, concerning architectural composition: “The changing visual picture is only the beginning of the sensory experience; the changes from light to shade, from hot to cold, from noise to silence, the flow of smells associated with the spaces, and the tactile quality of the surfaces underfoot, all are important to the cumulative effect.”<sup>32</sup> Creating beauty, whether through the design of individual buildings or entire cities, requires the involvement of all the senses.

All the senses are touted by Virginia Postrel as well, in her widely read book *The Substance of Style*<sup>33</sup>. In her chapter entitled “The Aesthetic Imperative”, Postrel says “We are demanding and creating an enticing, stimulating, diverse and beautiful world...Aesthetics is more persuasive than it used to be...Sensory appeals are everywhere, they are increasingly personalized, and they are intensifying.”

Shifting the discussion slightly from sensible to sensual, evolutionary psychologists toward the end of the 20<sup>th</sup> century increasingly adopted Freudian and neo-Darwinian conceptions of art and beauty. Professor Jennifer McMahon, Department of Philosophy at the University of Adelaide: “Either art is connected with using up intellectual or physical energies once required for survival, or art is a legacy of the displays of the mating game... Beauty is conceived as simply a sublimation of desire whose original teleology is procreation.”<sup>34</sup> In short, sex – highly stimulating to all the senses – is beautiful.

Finally, foreshadowing the upcoming section on the contributions of behavioral psychologists, architect Oscar Newman wrote *Design Guidelines for Creating Defensible Space*<sup>35</sup>, one of the principal texts on Crime Prevention Through Environmental Design (CPTED). The term describes how architectural designs – building layout and site plan – allow inhabitants to ensure their own security. Beautiful moments are not possible if fear dominates the senses.

The eighth and final beautiful universal truth is the beauty found in the exhilaration of one or more of the senses.

### **Anatomy Of The Human Brain**

To what extent are theories of beauty driven by the biology of the brain in which those theories originate?

As first theorized by Dr. Paul MacLean in the 1960s and explicated in this book *The Triune Brain in Evolution*<sup>36</sup>, the human brain consists of three principal components, derived from three progressive evolutionary periods:

1. The Reptilian Brain (a.k.a. Archipallium Brain, R-Complex), which includes the brain stem and the cerebellum, is the oldest brain in all animals. The functions controlled by the Reptilian Brain are related to body maintenance and physical survival – breathing, blood circulation, digestion, reproduction, aggression, stress responses, territorial instincts, ritual displays, and social dominance. Broadly speaking, then, the Reptilian Brain administers our *physical being*.
2. The Mammalian Brain (Paleomammalian Brain, Limbic System) consists of the septum, amygdala, hypothalamus, hippocampal complex, and cingulate cortex. Among other functions, the Mammalian Brain governs activities related to emotions and feelings – “fight or flight”, reproductive behavior, parental attachment to and care of offspring, etc. Thus, in general, the Mammalian Brain is responsible for our *emotional being*.
3. The Neocortex (Neopallium Brain, Cerebrum, Cortex), comprises two-thirds of the total brain mass in humans, takes up a much smaller portion of the brains of other mammals, and doesn't exist in non-mammals (reptiles, birds, fish, insects, etc.). Dr. MacLean regarded the addition of the Neocortex as the most recent step in the evolution of the human brain, conferring the ability for language, abstraction, planning, and perception. The right-side of the Neocortex is more spatial, abstract, musical and artistic, while the left-side is more linear, rational, and verbal. The Neocortex therefore is the locale of our *intellectual being*.

As we'll see momentarily in the section on the Beautiful Schema, each of the above three brains can be linked to differences in how we perceive beauty.

In the Beautiful Schema a fourth level is also postulated, which goes beyond Dr. MacLean's work. Without attempting to be anatomically specific, numerous authors have observed that the brain also harbors something variously called our innermost self, life force, soul, *spiritual being*.

### Theories Of Leading Behavioral Psychologists

In addition to theories of beauty and the anatomy of the brain, the perspectives of psychologists are highly relevant. The focus herein is on behavioral psychologists who developed the concept of a "hierarchy of needs". As again will be seen momentarily in section on the Beautiful Schema, different levels in the human hierarchy of needs correlate with different perceptions of beauty.

Major studies that have been completed on the hierarchy seem to support the proposals of William James<sup>37</sup> and Eugene Mathes<sup>38</sup> that there are three levels of human needs. James hypothesized the levels of material (physiological, safety), social (belongingness, esteem), and spiritual. Mathes proposed that the three levels were physiological, belongingness, and self-actualization; he considered security and self-esteem as unwarranted. Clayton Alderfer<sup>39</sup> developed a comparable hierarchy with his ERG (existence, relatedness, and growth) theory. His approach was based on the work of Gordon Allport<sup>40,41</sup> who incorporated concepts from systems theory into his work on personality.

The above contributors notwithstanding, the work of Abraham Maslow is the best known. In 1943 Maslow wrote an influential paper and subsequently the book *Motivation and Personality*<sup>42</sup> that delineated fundamental human needs. A key aspect of the model is the hierarchical nature of the needs, often been represented in a hierarchical pyramid. The lower the needs in the hierarchy, the more fundamental they are and the more a person will tend to abandon the higher needs in order to pay attention to sufficiently meeting the lower needs. Maslow originally posited five human Needs:

- **Physiological Needs** have to do with the maintenance of the human body. If we are unwell, then little else matters until we recover.
- **Safety Needs** are about putting a roof over our heads and keeping us from harm. If we are rich, strong and powerful, or have good friends, we can make ourselves safe.
- **Belonging Needs** introduce our tribal nature. If we are helpful and kind to others they will want us as friends.
- **Esteem Needs** are for a higher position within a group. If people respect us, we have greater power.
- **Self-actualization Needs** are to become what we are capable of becoming, which would our greatest achievement.

Maslow later added three more Needs by splitting two of the above five Needs. Between the Esteem and Self-actualization Needs were added:

- **Need to know and understand**, which explains the cognitive need of the academic.
- **Need for aesthetic beauty**, which includes "symmetry, order, and beauty."

The Self-actualization Need was divided into:

- **Self-actualization Need**, which is realizing one's own potential, as above.
- **Transcendence Need**, which is helping others to achieve their potential.

How noteworthy for our development of a Beautiful Schema, of course, that Maslow specifically identified aesthetics as a very high order Need, a prerequisite to continuing up towards Self-actualization and Transcendence. In Maslow's own words in *Motivation and Personality (ibid.)*: "I have attempted to study this phenomenon on a clinical-person logical basis with selected individuals, and have at least convinced myself that in *some* individuals there is a truly basic aesthetic need. They get sick (in special ways) from ugliness, and are cured by beautiful surroundings; they *crave* actively, and their cravings can be satisfied *only* by beauty. It is seen almost universally in healthy children. Some evidence of such an impulse is found in every culture and in every age as far back as the cavemen."

### Author's Additions

After reflecting upon all the above theories as well as my own empirical observations, I hereby propose that the following behavioral Needs be inserted into the Hierarchy of Needs when assembling the Beautiful Schema:

- **Need for novelty, uniqueness, invention** (a division of Maslow’s Know and Understand Need) – Creativity is obviously a fundamental, highly compelling trait of the human species. A prerequisite of creativity is a deep interest in and appreciation of all things new and different.
- **Need for connections to the past** (a division of Maslow’s Belonging Need) – For confirmation we do not have to look any further than the ancestor worship practiced in many cultures over many millennia throughout the world.
- **Need for an affinity with the natural environment** (another division of Maslow’s Belonging Need) – No one exists outside the realm of Mother Nature, and so to varying degrees of consciousness and appreciation everyone has a complete dependency on our universal surroundings.
- **Need for multiple senses to synergistically amplify the impact of experiences** (a division of Maslow’s Physiological Need) – The greater number of our senses that can be brought into play at any given moment, the greater our awareness and understanding of our immediate circumstances – including times when our very survival may be at stake. Keen appreciation of multi-sensory perception has always been in our DNA.
- **Need for movement-based stimulation, objects in motion, changes by time of day, seasons of the year, etc.** (another division of Maslow’s Physiological Need) – Static can be quite boring compared to dynamic. For example, how much fun is a San Francisco cable car when stopped at the end of the line versus “when climbing halfway to the stars”?

**The Assembly of the Beautiful Schema and Corresponding Beautiful Facets**

We are now ready to assimilate all the perspectives from the previous sources into a single “Beautiful Schema” and corresponding “Beautiful Facets.” Recall that the sources we have been considering are these:

- ✓ The observations of acclaimed philosophers, architects, city planners, etc., over the last 2,600 years;
- ✓ The anatomy of the human brain;
- ✓ The theories of leading behavioral psychologists; and
- ✓ Additional human needs posited by the author.

Traditionally, the observations of philosophers *et al.* have been classified into two groups, according to the kind of pleasurable experience that is evoked by beauty:

1. *Pythagorean* – those who recognize beauty through reason-based, contemplative experiencing of music, mathematical formulas, patterns in nature, so on; and
2. *Pleasure-Principle* – those who find beauty via the pleasures of the senses, including sights, sounds, tastes, etc.

We can correlate these two categories with the previously derived eight beautiful universal truths (e.g., *Beauty Is ...Divinity, Perfection, Truth*) and fit them all into one table. **Exhibit 2 on the next page is that consolidated table.**

EXHIBIT 2

PHILOSOPHERS ET AL.		
CLASSICAL	AESTHETES, ARCHITECTS, PLANNERS, ETC.	"COMMON THREADS"
Faith (Non-Provable)	Plato, Aquinas, Shelling, Hegel, Emerson, Keats, Schloeder	Divinity, Perfection, Truth
	Aristotle, Hogarth, Le Corbusier, Sullivan	Fitness, Purposiveness
Pythagorean (Reason)	Pythagoreans, Aristotle, Hogarth, Kant	Symmetry, Proportion
	Hogarth, Hutchinson, Lynch, Bacon, Kant	Order within Diversity and Complexity
Pleasure Principle (Senses)	Hogarth, L'Enfant, Burnham., Mumford	Monumental, Inspirational, Majestic
	Sitte, Burnham et al., Park, Wirth, Jacobs, Bacon, Neill, Mumford	Social Connection, Communal Expression, Cultural Continuity
	Vitruvius, Kant, Howard, Wright, Dewey, Henburn	The Natural Environment
	Newman	
	Hume, Puffer, Fitch, Bacon, McMahan, Postrel	Stimulation of the Senses

Note that in Exhibit 2 and the exhibits to follow that the horizontal dashed lines and colored boxes of the tables delineate groupings; at the bottom of Exhibit 2, for example, “Newman” and “Hume, Puffer, Fitch, Bacon, McMahon” are subsets of “Stimulation of the Senses,” which in turn is a subset of “Pleasure Principle (Senses).”

In a similar manner, in Exhibit 3, we can correlate and combine our previous delineations of the human brain, the works of behavioral psychologists, and this author’s additions:

EXHIBIT 3

HUMAN BRAIN	BEHAVIORAL PSYCHOLOGISTS			
	JAMES... MATHES... ALDERFER	MASLOW	TRADITIONAL (RED) PLUS THE AUTHOR'S (PURPLE) COMPONENTS OF THE “HIERARCHY OF NEEDS”	
Spiritual Being	Spiritual... Self- Actualization... Growth	Transcendence	Need to connect to something beyond the ego...including the knowable and unknowable	
Neocortex / Intellectual Being				Need to help others find self-fulfillment and realize their potential
			Self-Actualization	Need for growth, development and utilization of potential, becoming what one must be
			Aesthetics	Need for beauty in surroundings ...symmetry, order, balance
			Understanding and Knowledge	Need for novelty, uniqueness, invention (inductive reasoning)
Mammalian / Emotional Being	Social... Belongingness... Relatedness		Need to satisfy curiosity, explore, find solutions, look for relationships and meaning (deductive reasoning)	
		Self-Esteem	Need for respect from others – acceptance, recognition, prestige, reputation, appreciation, status	
			Love and Belonging	Need for self-respect – confidence, competence, adequacy, achievement, mastery
				Need for connections to the past
Reptilian / Physical Being	Material... Physiological... Existence		Need for love and affectionate relationships, belonging to a group, caring	
				Need for an affinity with the natural environment
		Safety	Need to be safe from harm, a predictable world, consistency, fairness, routine, stability, security	
			Physiological	Need for multiple senses to amplify the impact of experiences
			Need for movement-based stimulation, objects in motion, changes by time of day, seasons of	
			Need for air, water, food, warmth and shelter, sleep, sex	

Now comes the a moment of enlightenment, a conceptual windfall: All the perspectives in Exhibits 2 and 3 – from Plato to Maslow, despite enormous differences in eras, cultures, professions, etc. – can be integrated into a single table. Stated differently, all the various viewpoints correlate with each other, as identified by the dotted horizontal bands in Exhibit 4. (Again, note that the table has been compiled from the works of the 40 individuals in Exhibit 1, plus the author’s additions shown in purple.)

EXHIBIT 4

PHILOSOPHERS ET AL.			HUMAN BRAIN	BEHAVIORAL PSYCHOLOGISTS		
CLASSICAL	AESTHETES, ARCHITECTS, PLANNERS, ETC.	“COMMON THREADS”		JAMES... MATHES... ALDERFER	MASLOW	TRADITIONAL (RED) AND ADDITIONAL (PURPLE) COMPONENTS OF THE “HIERARCHY OF NEEDS”
Faith (Non-Provable)	Plato, Aquinas, Shelling, Hegel, Emerson, Keats, Schloeder	Divinity, Perfection, Truth	Spiritual Being	Transcendence	Need to connect to something beyond the ego...including the knowable and unknowable	
					Need to help others find self-fulfillment and realize their potential	
Pythagorean (Reason)	Aristotle, Hogarth, Le Corbusier, Sullivan	Fitness, Purposiveness	Neocortex / Intellectual Being	Spiritual... Self-Actualization... Growth	Need for growth, development and utilization of potential, becoming what one must be	
	Pythagoreans, Aristotle, Hogarth, Kant	Symmetry, Proportion			Aesthetics	Need for beauty in surroundings ...symmetry, order, balance
	Hogarth, Hutchinson, Lynch, Bacon, Kant	Order within Diversity and Complexity			Understanding and Knowledge	Need for novelty, uniqueness, invention (inductive reasoning)
					Need to satisfy curiosity, explore, find solutions, look for relationships and meaning (deductive reasoning)	
Pleasure Principle (Senses)	Hogarth, L'Enfant, Burnham et al., Mumford	Monumental, Inspirational, Majestic	Mammalian / Emotional Being	Social... Belongingness... Relatedness	Need for respect from others – acceptance, recognition, prestige, reputation, appreciation, status	
	Sida, Burnham et al., Park, Wirth, Jacobs, Bacon, Neill, Mumford	Social Connection; Communal Expression, Cultural Continuity			Self-Esteem	Need for self-respect – confidence, competence, adequacy, achievement, mastery
					Love and Belonging	Need for connections to the past
	Vitruvius, Kant, Howard, Wright, Dewey, Hapburn	The Natural Environment			Need for love and affectionate relationships, belonging to a group, caring	
					Need for an affinity with the natural environment	
	Newman	Stimulation of the Senses			Safety	Need to be safe from harm, a predictable world, consistency, fairness, routine, stability, security
Hume, Puffer, Fitch, Bacon, McMahon, Postrel	Stimulation of the Senses	Material... Physiological Existence	Physiological	Need for multiple senses to amplify the impact		
		Reptilian / Physical Being		Need for (1) movement-based stimulation, (2) objects in motion, (3) changes by time of day, day of year, etc.		
				Need for air, water, food, warmth and shelter, sleep, sex		

The jigsaw puzzle is not quite complete. Each of the 15 horizontal bands needs a name and a summary description, a.k.a. a “beautiful glossary”, to help us lock the concepts into our minds.

Exhibit 5 on the next page presents the beautiful glossary developed by the author, hereafter called the Beautiful Facets. These are essentially 15 categories of civic beauty. All beautiful urban places can be described using this glossary of the 15 Beautiful Facets.

EXHIBIT 5

PHILOSOPHERS ET AL.			HUMAN BRAIN	BEHAVIORAL PSYCHOLOGISTS			THE 15 RESULTING BEAUTIFUL FACETS
CLASSICAL	AESTHETES, ARCHITECTS, PLANNERS, ETC.	"COMMON THREADS"		JAMES... MATHES... ALDERFER	MASLOW	TRADITIONAL (RED) AND ADDITIONAL (PURPLE) COMPONENTS OF THE "HIERARCHY OF NEEDS"	
Faith (Non-Provable)	Plato, Aquinas, Shelling, Hegel, Emerson, Keats, Schloeder	Divinity, Perfection, Truth	Spiritual Being	Transcendence	Need to connect to something beyond the ego...including the knowable and unknowable	Epiphany	
						Need to help others find self-fulfillment and realize their potential	Mentoring
Pythagorean (Reason)	Aristotle, Hogarth, Le Corbusier, Sullivan	Fitness, Purposiveness	Neocortex / Intellectual Being	Spiritual... Self-Actualization... Growth	Needs for growth, development and utilization of potential, becoming what one must be	Self Fulfillment	
						Hogarth, Hutchinson, Lynch, Bacon, Kant	Order within Diversity and Complexity
	Hogarth, L'Enfant, Burnham et al., Mumford	Monumental, Inspirational, Majestic		Understanding and Knowledge	Need for novelty, uniqueness, invention (inductive reasoning)		
						Siza, Burnham et al., Park, Wirth, Jacobs, Bacon, Neill, Mumford	Social Connection; Communal Expression, Cultural Continuity
Pleasure Principle (Senses)	Vitruvius, Kant, Howard, Wright, Dewey, Hepburn	The Natural Environment	Mammalian / Emotional Being	Social... Belongingness... Relatedness	Need for respect from others - acceptance, recognition, prestige, reputation, appreciation, status		
						Newman	Stimulation of the Senses
	Hume, Puffer, Fitch, Bacon, McMahon, Postrel			Safety	Need for connections to the past		
			Reptilian / Physical Being	Material... Physiological... Existence	Need for an affinity with the natural environment	[Mother] Nature	
					Need to be safe from harm, a predictable world, consistency, fairness, routine, stability, security	Surety	
					Need for multiple senses to amplify the impact	Synergy	
					Need for (1) movement-based stimulation, (2) objects in motion, (3) changes by time of day, day of year, etc.	Dynamism	
					Need for air, water, food, warmth and shelter, sleep, sex	Sensation	

To illustrate, Exhibit 6 is the horizontal band for the Beautiful Facet of Revelation, extracted from the table in Exhibit 3. Among other connections, the band links the "common thread" of the works of Hogarth, Hutchinson, Kant, etc., with the anatomy of the Neocortex Brain as well as the behavioral psychiatrist Abraham Maslow's hierarchy of human needs.

EXHIBIT 6

PHILOSOPHERS ET AL.			HUMAN BRAIN	BEHAVIORAL PSYCHOLOGISTS			THE 15 RESULTING BEAUTIFUL FACETS
CLASSICAL	AESTHETES, ARCHITECTS, PLANNERS, ETC.	"COMMON THREADS"		JAMES... MATHES... ALDERFER	MASLOW	TRADITIONAL (RED) PLUS THE AUTHOR'S (PURPLE) COMPONENTS OF THE "HIERARCHY OF NEEDS"	
Pythagorean (Reason)	Hogarth, Hutchinson, Lynch, Bacon, Kant	Order within Diversity and Complexity	Neocortex / Intellectual Being	Spiritual... Self Actualization... Growth	Understanding and Knowledge	Need to satisfy curiosity, explore, find solutions, look for relationships and meaning (deductive reasoning)	Revelation



Exhibit 7 contains a synopsis of each of the 15 Beautiful Facets. *For examples of each from around the world, see the "15 Beautiful Facets" tab at CitiesBeautiful.org.*

EXHIBIT 7

THE 15 RESULTING BEAUTIFUL FACETS	
▶ Epiphany	Beautiful experiences epitomizing that which may not be provable, frequently is spiritual, always is a leap of faith, while simultaneously validate one's sense of self-worth and even transcendence.
▶ Mentoring	Beautiful experiences stemming from searching for ultimate truths; teaching, inspiring, or otherwise contributing to the lives of humankind directly (e.g., one-on-one instruction) or indirectly (e.g., writing a book); including the self-esteem from being qualified to do so.
▶ Self Fulfillment	Beautiful experiences arising not only from recognizing and enjoying a state of self actualization – "be all that you can be" – but also from being able to competently contribute back to the world (i.e., not wasting one's precious life, not just taking up space).
▶ Elegance	Beautiful experiences emanating from the well proportioned, refined, graceful qualities of an object, sometimes described mathematically.
▶ Originality	Beautiful experiences springing from appealingly novel, unprecedented, or even unique circumstances and interpretations, including those one personally causes to happen (i.e., creativity).
▶ Revelation	Beautiful experiences deriving from investigating, evaluating and assimilating pieces of life's endless complexity, including not only the knowledge gained but also the gratification of solving a puzzle.
▶ Grandeur	Beautiful experiences emerging from awe of the magnitude, impressiveness, eminence of a place or structure, notably those engendering a sense of affinity and pride.
▶ Selfhood	Beautiful experiences launched by surroundings that contribute to and resonate with one's positive self-image.
▶ Chronicle	Beautiful experiences coming from interactions with historical streetscapes, buildings, songs, photographs, and other reminders of the past – which underscore our universal affiliations over space and time.
▶ Kinship	Beautiful experiences flowing from a highly agreeable, distinctive social and cultural environment, especially when "everyone knows your name and they're always glad you came".
▶ [Mother] Nature	Beautiful experiences originating in the natural world – ultimately the source of everything humankind knows and frequently the benchmark for the perfection humankind pursues.
▶ Surety	Beautiful experiences issuing from a secure, reliable, consistent, predictable environment.
▶ Synergy	Beautiful experiences leveraging off the simultaneous stimulation of two or more senses, i.e., "the whole is greater than the sum of its parts."
▶ Dynamism	Beautiful experiences streaming from energetic rather than static circumstances, whether one is stationary or in motion, and when environs are changing by time of day, seasons of the year, etc.
▶ Sensation	Beautiful experiences bursting from the vivification of our biological senses (visual, auditory, gustatory, olfactory, tactile, proprioceptive, gravitational), arguably enhanced by awareness training.

Exhibit 8 puts it all together – the Beautiful Schema and the corresponding Beautiful Facet

EXHIBIT 8

PHILOSOPHERS ET AL.		HUMAN BRAIN		BEHAVIORAL PSYCHOLOGISTS		THE 15 RESULTING BEAUTIFUL FACETS
CLASSICAL	AESTHETICS, ARCHITECTS, PLANNERS, ETC.	SPIRITUAL BEING	JAMES... MATHES... ALDERFER	MASLOW	TRADITIONAL (RED) AND ADDITIONAL (PURPLE) COMPONENTS OF THE "HIERARCHY OF NEEDS"	
Faith (Non-Provable)	Pico Aquino, Shering, Hegel, Emerson, Kabb, Schloeder	Spiritual Being	Spiritual... Self...	Transcendence	Need to connect to something beyond the ego - including the transcendent and transcendent	Epiphany
Pythagorean (Reason)	Aristotle, Hogarth, Le Comusier, Sullivan	Neocortex/ Intellectual Being	Actualization... Growth	Self-Actualization	Need to help others find self-fulfillment and realize their potential	Mentoring
	Pythagoreans, Aristotle, Hogarth, Le Comusier, Sullivan			Aesthetics	Need for growth, development and utilization of potential, becoming what one must be	Self-Fulfillment
	Hogarth, Hutchnison, Lynch, Bacon, Kant			Understanding and Knowledge	Need for beauty in surroundings - symmetry, order, balance	Elegance
	Hogarth, L. Erlant, Burham et al., Mumford			Self-Esteem	Need for novelty, uniqueness, invention (creative reasoning)	Originality
	Sax, Burham et al., Park, Wirth, Jacobs, Bacon, Mumford	Mammalian/ Emotional Being	Social... Relatedness	Love and Belonging	Need to satisfy curiosity, explore, learn, and reason (deductive reasoning)	Revelation
	Sax, Burham et al., Park, Wirth, Jacobs, Bacon, Mumford				Need for respect from others - acceptance, recognition, prestige, reputation, appreciation, status	Grandeur
	Sax, Burham et al., Park, Wirth, Jacobs, Bacon, Mumford				Need for self-respect - confidence, competence, adequacy, achievement, mastery	Selfhood
	Sax, Burham et al., Park, Wirth, Jacobs, Bacon, Mumford				Need for connections to the past	Chronicle
Pleasure Principle (Senses)	Vitruvius, Kant, Howard, Wright, DeWey, Hobourn, Newman	Reptilian / Physical Being	Material... Psychological... Existence	Safety	Need for love and affectionate relationships, belonging to a group, caring	Kinship
	Vitruvius, Kant, Howard, Wright, DeWey, Hobourn, Newman			Physiological	Need for an affinity with the natural environment	[Mother] Nature
	Hume, Puffer, Fitch, Bacon, Melkshon, Roedel				Need to be safe from harm, a productive work, subsistence, financial, freedom, stability, security	Surety
	Hume, Puffer, Fitch, Bacon, Melkshon, Roedel				Need for multiple senses to amplify the impact	Synergy
	Hume, Puffer, Fitch, Bacon, Melkshon, Roedel				Need for (1) movement-based stimulation, (2) objects in motion, (3) changes by time of day, day of week, etc.	Dynamism
	Hume, Puffer, Fitch, Bacon, Melkshon, Roedel				Need for air, water, food, warmth and shelter, sleep, sex	Sensation

#### 4. EMPIRICAL VALIDATION OF THE BEAUTIFUL SCHEMA AND BEAUTIFUL FACETS

To repeat Dr. Ethel Puffer Howes' quote at the beginning of this paper, from her book *The Psychology of Beauty*:

"I believe the way is at last opened from the traditional philosophy of aesthetics to a healthy and concrete psychological theory...The beautiful object possesses those qualities which bring the personality into a state of unity and self-completeness."

That is, again, we say "Beautiful!" when we experience a spontaneous and deeply appreciative connection between our true selves and our surroundings. Beautiful experiences are not passive; they are participatory – physically, emotionally, intellectually, soulfully.

Arguably then, a high correlation exists between the attractions people choose to visit and that which they find to be beautiful. That being the case, if we empirically identify the civic features of any given city that are the most popular, we ought to be able to link those features to the 15 Beautiful Facets – and thereby validate the 15 Beautiful Facets.

As indicated in the title of this paper, San Francisco is our case study. We are about to "run the numbers" to identify the most popular San Francisco attractions – hereinafter to be known as the "Favorites".

The empirical approach encompasses:

- Counting the actual number of visitors to various attractions, and
- Monitoring guidebooks, polls, and other literature pertaining to visitation patterns.

##### Counting the Actual Number of Visitors

This could also be called "voting with your feet and pocketbook." Two surveys predominate:

- The San Francisco Convention and Visitors Bureau *a.k.a.* San Francisco Travel ranking of attractions, as reported at the San Francisco Chamber of Commerce's website, based on surveys of San Francisco visitors (defined as traveling more than 100 miles and generally staying overnight)...
  - Fisherman's Wharf (which attracted 81% of all visitors)
  - Chinatown (74%)
  - Golden Gate Bridge (73%)
  - Cable car ride (65%)
  - Union Square (65%)
  - Powell and Market Streets area (58%)
  - Golden Gate Park (56%)
- The *San Francisco Business Times*' ranking of attractions, based on the number of paid visitors (thereby excluding free sites such as the Golden Gate Bridge)...
  - Cable Cars
  - Giants
  - Alcatraz
  - 49ers
  - San Francisco Museum of Modern Art (SFMOMA)
  - Palace of Legion of Honor
  - San Francisco Symphony
  - Academy of Sciences
  - Maritime National Historical Park
  - San Francisco Zoo
  - Exploratorium
  - San Francisco Opera
  - San Francisco Ballet
  - Fishermen's Wharf Wax Museum
  - Yerba Buena Center for Arts

### **Monitoring Guidebooks and Similar Sources**

Empirical data can be gleaned from the number of times various attractions are mentioned in guidebooks, Internet Web sites, and similar sources. For example:

- *Lonely Planet*
- *Frommer's*
- *Fodors*
- *Michelin Guides*
- *Access Travel Guides*
- *Tripadvisor.com*

Usually these listings are binary (an attraction is or is not named), but sometimes will be rated (such as Frommers assignment of zero to three stars to each attraction). Another potential measure is the actual column inches of text devoted to each attraction.

A final source is the author's personal experiences from having loved living in San Francisco for four decades.

### **Resulting "Favorites"**

Based on the above two types of analyses, 21 San Francisco attractions qualify as a Favorites. These are not all the major attractions that the city has to offer, but clearly are preeminent. The Favorites will contribute the empirical portion of the Beautiful Schema" and corresponding Beautiful Facets delineated previously.

Note that this list is the author's, rather than a previously published convention. Further, the author has sometimes grouped attractions in ways other observers have not (e.g., the "first tier" Neighborhoods).

In alphabetical order, the Favorites are:

- Alamo Square "Painted Ladies" and all other Victorian Homes
- Alcatraz
- Cable Cars, F-Line Street Cars, and the Cable Car Museum
- Chinatown, bounded generally by Columbus, Kearny, Bush, and Powell Streets
- Civic Center including City Hall
- Cliff House including Seal Rock, Camera Obscura, Fake Cliffs, Sutro Heights, Sutro Baths, Ocean Beach
- Coit Tower including Pioneer Park
- Exploratorium
- Ferry Building and Farmers Market
- Fisherman's Wharf from Pier 39 to Ghirardelli Square
- Golden Gate Bridge including the visitor centers at both ends
- Golden Gate Park including Strybing Arboretum, Conservancy of Flowers, Japanese Tea Garden, Windmills, Buffalo Herd, etc.
- Lombard Street AKA "The World's Crookedest Street"
- Maritime National Historic Park including the Pamponito Submarine and Jeremiah O'Brien Liberty Ship
- Mission Dolores
- Museums (First Tier) comprised of the Academy of Sciences, DeYoung, Legion of Honor, Asian Art, and Museum of Modern Art
- Neighborhoods (First Tier) comprised of Haight-Ashbury, Castro, North Beach/Telegraph Hill, Nob Hill, Mission
- Performing Arts including the San Francisco Opera, Ballet, Symphony, Actors Conservatory Theater, and other prominent venues for dance, theater, music, etc.
- Presidio including Fort Point, National Cemetery, Civil War era housing, Batteries, and portions of the Golden Gate National Recreation Area (GGNRA, especially Crissy Field)
- San Francisco Zoo, Steinhart Aquarium, and the Aquarium by the Bay
- Union Square Shopping District, bounded generally by Market, Powell, Sutter, and Kearny Streets

**Linking the 15 Beautiful Facets to the Favorites**

Exhibit 9 does this, based on the author’s judgment. Note that any given civic feature can relate to more than one of the 15 Facets, so Exhibit 9 is focusing on the most prominent affinity between each Favorite and the 15 Facets.

Note too that Exhibit 9 includes “Honorable Mentions” for each of the 15 Facets. These are features of San Francisco that in the author’s opinion also correlate empirically with the Beautiful Facets, even if they do not have the same number of visitors as the Favorites.

Finally, note that Exhibit 9 also contains comments by the author in the Reasoning column on the appropriateness of each city feature to the respective 15 Facets.

**EXHIBIT 9**

BEAUTIFUL FACETS	PRINCIPAL FEATURES	HONORABLE MENTIONS	REASONING
Epiphany	Mission Dolores, New St. Mary’s Cathedral, Temple Emanu-El, Grace Cathedral	Old St. Mary’s Cathedral, Tin How Temple	Mission Dolores (the oldest original intact Mission in California) has always had a central place in the religious life of San Francisco. Mission Dolores and the other pre-eminent spiritual centers (Grace Cathedral et al.), provide centuries of proof of humankind’s unending religiosity.
Mentoring	Museums - DeYoung, Asian Art, SFMOMA, Legion of Honor	University of California at San Francisco, San Francisco Conservatory of Music	San Francisco’s many world-class museums provide obvious instructional opportunities in highly diverse subject areas. The same is true of the city’s educational institutions, e.g., UCSF is one of the world’s leading bio-med research institutions
Self-Fulfillment	Performing Arts - Ballet, Opera, Symphony, American Conservatory Theater, City Lights Bookstore	Yerba Buena Center for the Arts, Walt Disney Family Museum	Arguably the performing arts personify among the highest cultural expressions of the human condition, as much for the audiences as the creators (e.g., composers/playwrights/choreographers, musicians/actors/dancers.) Less exalted but nonetheless expressive are vanguard institutions like City Lights Bookstore, where Ginsberg’s epic poem Howl was launched and defended.
Elegance	Civic Center, Especially City Hall, Conservatory of Flowers, Garden Court in the Sheraton Palace Hotel	Coit Tower, Ferry Building, James Flood Building	Civic Center has been called the finest example of the City Beautiful movement in the United States, with City Hall as truly the crown jewel. Many could well argue that other edifices have an even greater fame to true elegance such as the must-see Conservatory of Flowers in Golden Gate Park and the Garden Court in the Sheraton Palace Hotel.
Originality	Lombard Street, Transamerica Building, Farallon Islands	Telegraph Hill Parrots	Driving, walking, or (dare-devil) bicycling down “the crookedest street in the world” is undeniably a delightfully novel experience. San Francisco is home to numerous other only-place-in-the-United States experiences as well, including the iconic Transamerica Building.
Revelation	Academy of Sciences, Exploratorium, Randall Museum	Zeum, Barbary Coast Walk, City Guide Tours	The Exploratorium is encompasses innumerable, completely hands-on, interactive, fascinating learning experiences. When the Exploratorium moves to its new over-water location on the Embarcadero, the opportunities for personal enlightenment will be even greater. Well formulated outdoor explorations on foot or by car (all free) are in the Honorable Mentions.
Grandeur	Golden Gate Bridge, Bay Bridge, Palace of Fine Arts	Nob Hill, Russian Hill	Everyone who drives or walks across the Golden Gate Bridge is awed by the structure, but it is even more breath-taking when seen from sea level (from Fort Point or on a boat). Though not as well known, the Bay Bridge and other cited features certainly have grandeur about them as well.
Selfhood	The Castro (Gay “Coming Out” Mecca), Union Square and Vicinity, Angel Island (Ellis Island West)	Cultural Institutions -- Jewish Museum, Chinese Cultural Center, Italian American Museum, Mexican Museum, etc.	Gays and lesbians gravitate from all over the world to the Castro to be able comfortably to be themselves. Shopping for oneself is only one manifestation of Selfhood, but Union Square is one of the best known places in the nation for such self-expression.
Chronicle	Presidio Including National Cemetery, Fort Point, Civil War Era Housing, Cemetery, Etc.; Maritime National Historical Park; Haas-Lilienthal House	Wells Fargo Museum, California Historical Society Museum, Jackson Square	Given that San Francisco has been continuously occupied by Europeans and numerous other immigrant groups for well over two centuries, the city has both lengthy and high diversified historical, immersive landmarks.
Kinship	Neighborhoods – Haight-Ashbury, North Beach, Japantown, Mission (and many more)	Parades -- Columbus day, Chinese New Year’s, LGBT Pride, etc.; Sports Teams -- Giants, Forty-Niners, Etc.	San Francisco’s many distinctive neighborhoods generate opportunities to enjoy the company of complementary personas, for visitors and residents alike. Such Kinship can actually transcend time and space, e.g., the Kinship of “The Summer of Love” in Haight Ashbury still reverberates worldwide.

Exhibit 9 Continued

<b>[Mother] Nature</b>	Golden Gate Park including Japanese Tea Garden, Stowe Lake, Buffalo Herd, Etc., GGNRA, San Francisco Zoo	"Formal" Parks -- Huntington, Sidney Walton, Levi Strauss; Aquariums -- National Academy of Sciences and Pier 39	Opportunities to enjoy nature in Golden Gate Park are remarkably diverse and even unique within U.S. urban parks (e.g., the buffalo herd). Those opportunities notwithstanding, San Francisco is home to numerous other world-class urban parks (see the Honorable Mentions).
<b>Surety</b>	Alcatraz, Fleet Week and the Blue Angels	Fort Point, USS Pampanito, USS Jeremiah O'Brien	Al Capone is perhaps the best know inmate of Alcatraz, and certainly establishes Alcatraz as a symbol of the triumph of law enforcement over evil doers. Similarly, Fleet Week provides ample evidence of the security provided by military forces -- culminating with the immensely popular Blue Angels flying among the city's skyscrapers.
<b>Synergy</b>	Chinatown, Red and White Fleet Tour of the Bay	Union Square at Christmastime; Watching/Hearing/Smelling the Sea Lions at Pier 39; Events at the Cow Palace - Circuses, Rodeos, Rock Concerts, etc.	Chinatown is especially popular among visitors and San Francisco's residents alike because of the exotic impacts on all senses -- sights and smells when moving through food stalls along Stockton Street, the non-stop chattering in a completely foreign language, the tactile experience of being in a tightly packed crowd, the singular quality of genuine Chinese meals, and on and on.
<b>Dynamism</b>	Cable Cars, Historic Trolleys on Market Street and the Embarcadero, Hang Gliding at Fort Funston	49 Mile Drive	The Cable Cars are not only iconic but a vehicle (literally) for constantly-changing fun -- standing on the running board while going up and down very steep slopes, enjoying the bay window-centric architecture, checking out the street scenes, and catching glimpses of breath-taking vistas of the Bay. In recent years similar experiences have become possible riding several dozen Historic Street cars from around the U.S. and worldwide -- including a genuine New Orleans streetcar named Desire!
<b>Sensation</b>	Fisherman's Wharf	Smell of the ocean; Sound of the carillons and fog horns; Tastes in restaurants (the most restaurants per capita in the world); Sight of pelicans, ferry boats and freighters; Feel of the air, especially fog	Fisherman's Wharf is known worldwide for its unusual sights, smells, sounds, etc. The not as widely known, the Honorable Mentions are equally if not more compelling experiences. (These Honorable Mentions are a small sampling of what the senses can experience in San Francisco.)

We conclude that the 15 Beautiful Facets can indeed be associated with the empirical preferences of San Francisco's 16 million annual tourists. We cannot as yet say whether they do in fact have beautiful experiences consistent with our previous definition (i.e., "We say 'Beautiful!' when we experience a spontaneous and deeply appreciative connection between our true selves and our surroundings"). Arguably, though, the popularity of San Francisco's attractions among the ever increasing tens of millions of past and present visitors is due to some such deeply appreciative connection.

**A Sidebar: Linking the Beautiful Facets to Entire Cities**

We have been talking about features within cities that correspond to the 15 Beautiful Facets. Arguably, cities as a whole can represent one or more Facets. Exhibit 10 offers examples; the exhibit also includes relevant quotes about the Beautiful Facets, from the authors listed in Exhibit 1 and in the Addendum. (Recall that brief definitions of the Facets were provided in Exhibit 7.)

**EXHIBIT 10**

BEAUTIFUL FACETS	REPRESENTATIVE QUOTE	EXEMPLARY CITIES
<b>Epiphany</b>	<i>Emerson</i> : "Never lose an opportunity of seeing anything that is beautiful, for beauty is God's handwriting -- a wayside sacrament."	Kyoto, Lhasa, Varanasi, Mecca
<b>Mentoring</b>	<i>Keats</i> : "Beauty is truth, truth beauty -- that is all Ye know on earth, and all ye need to know."	Oxford, Cambridge, Princeton, Bologna
<b>Self-Fulfillment</b>	<i>Sullivan</i> : "It is the pervading law of all things organic and inorganic...that form ever follows function."	Venice, Mont Saint-Michel, Singapore
<b>Elegance</b>	<i>Aristotle</i> : "The chief forms of beauty are order and symmetry and definiteness, which the mathematical sciences demonstrate in a special degree."	Versailles, Forbidden City, Savannah

Exhibit 10 Continued

<b>Originality</b>	<i>Bacon</i> : "...create strongly articulated nuclei built around beloved landmarks and institutions carefully distributed throughout the residential fabric, to establish powerful architectural imagery and rhythms..."	Göreme City in the Cappadocia, Turkey; Dubai's Manmade Islands; Floating City in Aberdeen Harbor in Hong Kong
<b>Revelation</b>	<i>Lynch</i> : "The individual must perceive his environment as an ordered pattern, and is constantly trying to inject order into his surroundings...A distinctive and legible environment heightens the potential depth and intensity of the human experience."	Jerusalem, Rome, Istanbul, Marrakech
<b>Grandeur</b>	<i>Burnham</i> : "Make no little plans; they have no magic to stir men's blood and probably will themselves not be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will not die."	St. Petersburg (Russia), Washington DC, Angkor Wat
<b>Selfhood</b>	<i>Burnham</i> : "The civic center's beauty would reflect in the souls of the city's inhabitants, inducing order, calm and propriety therein."	Vienna, Budapest, London
<b>Chronicle</b>	<i>Neill</i> : "What is historic preservation?...It is an equation between self and history so powerful that it makes us lie down in front of bulldozers, raise toppled statues, salvage old boats."	UNESCO World Heritage Cities
<b>Kinship</b>	<i>Robert Park</i> : "The attraction of the metropolis is due in part to the fact that in the long run every individual finds somewhere among the varied manifestations of city life the sort of environment in which he expands and feels at ease...that bring his innate dispositions to full and free expression."	<i>Neighborhood-Centric Cities</i> : New York (e.g., Greenwich Village, SoHo, Harlem, Upper East Side, Little Italy); Paris (Ile de la Cite, Marais, Montmartre, Latin Quarter, St. Germain-des-Pres), San Francisco (North Beach, Haight Ashbury, The Castro, Mission District)
<i>[Mother]</i> <b>Nature</b>	<i>Joyce Kilmer</i> : "I think that I shall never see A poem lovely as a tree"	<i>Natural beauty both within and around</i> : Vancouver, Lucerne, and "Garden Cities" e.g., Letchworth (UK), Radburn (USA)
<b>Surety</b>	<i>Newman</i> : "Defensible space is defined as a term used to describe a residential environment whose physical characteristics — building layout and site plan — function to allow inhabitants themselves to become key agents in ensuring their security."	Toledo and Avila (Spain); Dubrovnik (Croatia); Carcassonne (France); Taroudant (Morocco); Xi'an (China)
<b>Synergy</b> <i>[of the Senses]</i>	<i>Fitch</i> : "The aesthetic enjoyment of an actual building cannot be merely a matter of vision, it can only be a matter of total sensory perception...Only by manipulating the physical properties of his environment — heat, air, light, color, odor, sound, surface, space — can the architect communicate with his client at all."	Hong Kong; Macau, Bangkok
<b>Dynamism</b>	<i>Bacon</i> : "The changing visual picture is only the beginning of the sensory experience; the changes from light to shade, from hot to cold, from noise to silence, the flow of smells associated with the spaces, and the tactile quality of the surfaces underfoot, all are important to the cumulative effect."	<i>Actually Moving Cities --</i> "The World" Floating Luxury Community and Selected, Very Large Cruise Ships <i>Always on the Go "24 Hour" Cities --</i> Cairo, Madrid, Barcelona, Buenos Aires
<b>Sensation</b>	<i>Webster's Dictionary</i> : "...having qualities that give great pleasure or satisfaction to see, hear, think about, etc.; delighting the senses or mind"	Stockholm, Jodhpur, Rio De Janeiro <i>(especially during Carnival)</i>

**What Does All This Have to Do with You?**

The adage that "beauty is in the eye of the beholder" is in fact the case. Each of us has a different perspective on beauty because experiencing beauty is a highly personalized event. To again quote Dr. Ethel Puffer Howes: "The beautiful object possesses those qualities which bring the personality into a state of unity and self-completeness." Each of us has a different personality, and hence each of us has a different reaction to a potentially beautiful object.

Accordingly:

1. Since each of us perceives beauty differently, each of us will have different preferences among the 15 Beautiful Facets. I might resonate the most to the Beautiful Facet of Grandeur, while you might have the greatest connection with the Beautiful Facet of Elegance.
2. Correspondingly, each of us will have different favorite features in a city. Continuing with the above example, I will find myself most interested in San Francisco's Grandeur features (e.g., the Golden Gate Bridge) while you will be attracted to the city's Elegance features (the Conservatory of Flowers in Golden Gate Park).

3. Taking a broader view, if a method can be found for determining which Facets each of us favors (Grandeur vs. Elegance vs. other Beautiful Facets), that information can be used to advise us on which features of San Francisco each of us should be sure to visit.
4. For that matter, we would then have guidance for the beautiful features to visit in other cities worldwide as well, if the features of those cities have been classified according to the 15 Beautiful Facets.
5. Thus, the benefits to you:
  - a. Comprehending the full spectrum of civic beauty, from “Sensation” to “Epiphany”;
  - b. Articulating to others whatever you find beautiful about a building, park, etc.;
  - c. Of far reaching significance – finding, appreciating, and promoting civic beauty from now on, wherever in the world you go.

**Developing such a method and applying it to multiple cities around the world of the benefit of everyone being able to discover what is beautiful for them in each locale – that is the ultimate purpose of CitiesBeautiful.org.**

So, let’s now turn to the development of such a method.

## 5. PERSONALIZED TEST OF WHAT IS BEAUTIFUL TO YOU

This section provides a brief introduction to the interactive method that has in fact already been developed:

- The “Civic Beauty Ranking Test (CBR)” available at the tab by the same name at CitiesBeautiful.org, and
- The related “Cities Beautiful Index (CBI)” calculated for each of the cities analyzed at CitiesBeautiful.org.

Again, the purpose of the CBR test is to determine your personal preferences among the 15 Beautiful Facets. You will then be able to use this information about yourself for predicting what features in San Francisco and other cities you will find the most beautiful, articulating to others what you find to be the most beautiful, etc.

### Civic Beauty Ranking (CBR) Test

The CBR is a psychometric questionnaire, somewhat like a Myers Briggs personality assessment test. At the CBR tab at CitesBeauful.org you will find a list of 45 civic features, each of which you will score on a scale of 1 (lowest) to 10 (highest) based on how beautiful the object is to you. Your answers will then be analyzed and a chart like the one in Exhibit 11 will be displayed:

EXHIBIT 11





The chart shows which Beautiful Facets resonate with you the most, next most, and so on down to the least. In this example, the person taking the test has highest affinity with the Facets of Epiphany, Elegance, Selfhood and Synergy. Consequently, when in San Francisco this person should be sure to visit the corresponding Principal Features and Honorable Mentions of Epiphany, Elegance and Chronicle listed previously in Exhibit 9 and reproduced in Exhibit 12.

EXHIBIT 12

BEAUTIFUL FACETS	PRINCIPLE FEATURES	HONORABLE MENTIONS
Epiphany	Mission Dolores	<i>Other Churches/Temples -- Grace Cathedral , New St. Mary's Cathedral, Temple Emanu-El</i>
Elegance	Civic Center, Especially City Hall	Conservatory of Flowers, Coit Tower, Garden Court in the Sheraton Palace Hotel, Ferry Building, James Flood Building
Chronicle	Presidio Including National Cemetery, Fort Point, Civil War Era Housing, Cemetery, Etc.	<i>Chronology Icons</i> (Mission Dolores, Presidio, Maritime National Historical Park, Jackson Square, etc.); <i>Lifestyle Icons</i> (Mission, Big Four Mansions, Chinatown, Alamo Square, Haight Ashbury, etc.)

At CitiesBeautiful.org, clicking on San Francisco menu option on the left side of the webpage will pull up a map of all that city's Principle Features color- and number-coded by the 15 Beautiful Facets. For example, the above Epiphany, Elegance, and Chronicle features are identified (respectively) with these three symbols:



Clicking on any icon generates a pop-up box with additional information. Exhibit 13 shows the interactive map available at the San Francisco page of CitiesBeautiful.org, a sample pop-up box, and a condensed version of the map's legend.

EXHIBIT 13



BEAUTIFUL FACET	MAP ICON	PRINCIPAL FEATURES	HONORABLE MENTIONS
Epiphany	1	Mission Dolores	<i>Other Churches/Temples -- Grace Cathedral , New St. Mary's Cathedral, Temple Emanu-El</i>
Mentoring	2	Museums - DeYoung, Academy of Sciences, Legion of Honor, Asian Art, SFMOMA	Columbus Day/ Chinese New Years/ Gay Freedom Day Parades
Self-Fulfillment	3	Performing Arts - Ballet, Opera, Symphony, Yerba Buena, American Conservatory Theater	City Lights Bookstore; Diverse Neighborhoods/Lifestyles
Elegance	4	Civic Center, Especially City Hall	Conservatory of Flowers, Coit Tower, Garden Court in the Sheraton Palace Hotel, Ferry Building, James Flood Building
Originality	5	Lombard Street	Transamerica Building, Telegraph Hill Parrots, Cable Cars, Farallon Islands
Revelation	6	Exploratorium	Barbary Coast Walk, City Guide Tours, 49 Mile Drive
Grandeur	7	Golden Gate Bridge	Bay Bridge, Panoramic View from Twin Peaks, the Marin Headlands from Lincoln Park
Selfhood	8	Union Square and Vicinity	Diverse Neighborhoods/Lifestyles; Gay ("Coming Out") Mecca; Angel Island (Ellis Island West)
Chronicle	9	Presidio Including National Cemetery, Fort Point, Civil War Era Housing, Cemetery, Etc.	<i>Chronology Icons</i> (Mission Dolores, Presidio, Maritime National Historical Park, etc.); <i>Lifestyle Icons</i> (Mission, Big Four Mansions, Chinatown, Alamo Square, Haight Ashbury, etc.)
Kinship	10	Neighborhoods -- Haight-Ashbury, Castro, North Beach, Japantown, Mission	Attending a sporting event (Giants, Forty-Niners); other types of events at the Cow Palace (circuses, rodeos, rock concerts, etc.)
(Mother) Nature	11	Golden Gate Park including Japanese Tea Garden, Stowe Lake, Buffalo Herd, Etc.	Parklands: Mountain Lake, Lincoln, Presidio (esp. near Lincoln Avenue); OGNRA, Ocean & Baker Beaches; "Formal" Parks (Huntington, Sidney Walton, Levi Strauss); Animal Life: Zoo and Aquariums
Surety	12	Alcatraz	Fleet Week and the Blue Angels
Synergy	13	Chinatown	Watching/hearing/smelling the sea lions off Pier 39; taking a Red and White Fleet tour of the Bay; Union Square at Christmastime
Dynamism	14	Cable Cars	Historic Trolleys on Market Street and the Embarcadero, Hang Gliding at Fort Funston
Sensation	15	Fisherman's Wharf	Smell of the ocean; Sound of the carillons and fog horns; Tastes in restaurants (the most restaurants per capita in the world); Sight of pelicans, ferry boats and freighters; Feel of the air, especially fog

The same process holds for all the other cities portrayed at CitiesBeautiful.org. The features of each of the cities at the website have been evaluated by the author vis-à-vis the 15 Beautiful Facets, and identified by their primary Beautiful Facet affiliation. Accordingly each person taking the CBR test obtaining a ranking of Beautiful Facets like the example in

Exhibit 11 can prioritize features to visit in the websites of many cities, in the same manner as the above Epiphany-Elegance-Chronicle example for San Francisco!

**Cities Beautiful Index (CBI)**

A CBI is calculated and reported for each city at the CitiesBeautiful.org website, in the manner to be described in a moment. The usefulness of the CBI is two-fold:

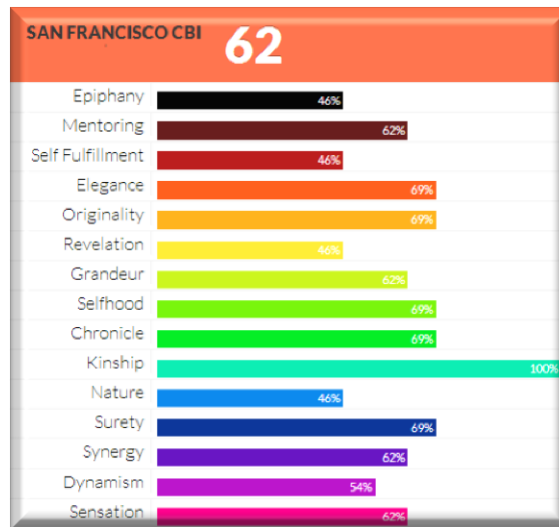
- 1) The CBI allows a numeric comparison of the overall civic beauty of multiple cities, on a scale of 1 to 100 (the higher the score, the greater the civic beauty).
- 2) To calculate the overall CBI, a score is also calculated in each city for each of the 15 Beautiful Facets and displayed in chart form, again on a scale of 1 to 100, so that an observer can at a glance determine which of the Beautiful Facets are a city’s forte and which Beautiful Facets are less so.

Correspondingly, you can utilize this information two ways:

- 1) By comparing the overall CBIs of multiple cities, you can prioritize the order in which you will investigate the civic beauty among them; that is, you would likely first visit the city receiving the highest score, then the city with the next highest score, and so on.
- 2) If the results of your CBR test showed that (using our previous example) your highest rated Beautiful Facets are Epiphany, Elegance and Chronicle, you could glance through the component CBI scores of each city to quickly determine which cities have those Facets as their strong suits, and hence decide whether to visit those cities first.

Here is an example of the Cities Beautiful Index chart displayed for each of the cities analyzed at CitiesBeautiful.org. Exhibit 14 shows the analysis results for San Francisco. The city has an overall CBI of 62, with particularly strong scores in the Beautiful Facets of Kinship, Elegance, Originality, etc.

**EXHIBIT 14**



How are each city’s overall CBI and component Beautiful Facets scored? The process has seven steps:

- For each of the Beautiful Facets, a city’s three best Principle Features are identified based on various third-party sources and the author’s personal experience. A city might have more than three Principle Features for a given Beautiful Facet, but only the top three are considered. The number of Principle Features to be included in the CBI calculation is thus 3 x 15 = 45 Principle Features.
- Each of the Principle Features is rated by the author on a scale of 1 to 3, broadly speaking as follows:
  - 3 = World Renowned
  - 2 = Well Known and/or Very Special
  - 1 = Not So Well Known But Nonetheless Special

- The scores of the three Principle Features for each Beautiful Facet are then summed.
- For each of the 15 Beautiful Facets, the number of Honorable Mentions is also counted. This number (up to a maximum of 4 Honorable Mentions) is added to the previous sum of the Principle Features.
- The combined score of the Principle Features and Honorable Mentions for each of the 15 Beautiful Facets is normalized on a scale of 1 to 100.
- The overall CBI is the average of the normalized scores for the 15 Beautiful Facets.
- Finally, a bar chart like the above one in Exhibit 14 is generated for the 15 Beautiful Facets.

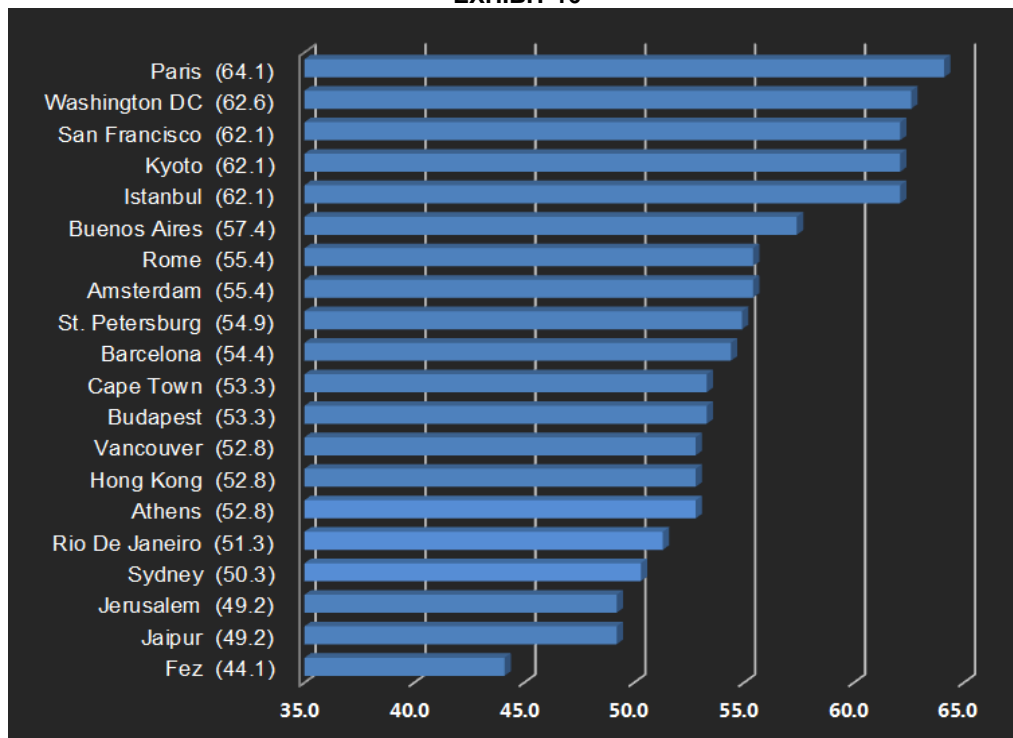
As an example, the calculations for San Francisco that led to the bar chart in Exhibit 14 are shown below in Exhibit 15. Addendum III provides the same detailed CBI scoring for all the cities analyzed at the CitiesBeautiful.org website.

Exhibit 15

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>SAN FRANCISCO</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Mission Dolores	2	Grace Cathedral	1	Temple Emanu-El	1	4	2	46.2
Mentoring	DeYoung Museum	2	Asian Art Museum	2	Museum of Modern Art (MOMA)	2	6	2	61.5
Self-Fulfillment	San Francisco Opera, Ballet, and Symphony	2	American Conservatory Theater (ACT)	1	City Lights Book Store	1	4	2	46.2
Elegance	Civic Center, Especially City Hall	2	Conservatory of Flowers	2	Garden Court in the Sheraton Palace Hotel	2	6	3	69.2
Originality	Lombard Street	3	Transamerica Building	3	New St. Mary's Cathedral	1	7	2	69.2
Revelation	Academy of Sciences	2	Exploratorium	2	Randall Museum	1	5	1	46.2
Grandeur	Golden Gate Bridge	3	Bay Bridge	2	Palace of Fine Arts	2	7	1	61.5
Selfhood	The Castro (Gay "Coming Out" Mecca)	3	Shopping -- Union Square and Vicinity	3	Angel Island (Ellis Island West)	1	7	2	69.2
Chronicle	Presidio Including Civil War Era Housing, Cemetery...	2	Maritime National Historical Park	2	Haas-Lilienthal House	1	5	4	69.2
Kinship	Neighborhoods -- Haight-Ashbury, Castro, Mission, North Beach, Telegraph Hill	3	Chinese New Years Parade	3	LGBT Pride Parade	3	9	4	100.0
Nature	Golden Gate Park - Japanese Tea Garden, Stowe Lake, Buffalo Herd, Etc.	2	Golden Gate National Recreation Area (GGNRA)	2	SF Zoo	1	5	1	46.2
Surety	Alcatraz	3	Fleet Week and Blue Angels	2	Fort Point	2	7	2	69.2
Synergy	Chinatown	3	Red and White Fleet tour of the Bay	2	Pier 39 Sea Lions	2	7	1	61.5
Dynamism	Cable Cars	3	Historic Trolleys on Market Street and the Embarcadero	2	Hang Gliding at Fort Funston	1	6	1	53.8
Sensation	Fisherman's Wharf	3	Panoramas -- Top of the Mark, Twin Peaks, Golden Gate Bridge Toll Plaza, etc.	3	Ocean Beach	1	7	1	61.5
<b>RESULTING OVERALL CBI SCORE =</b>									<b>62.1</b>

Finally, Exhibit 16 compares the Cites Beautiful Indices of the initial 20 cities analyzed at CitiesBeautiful.org. Among these, Paris scores as the most beautiful with an overall CBI of 64.1, while Fez comes in last with an overall CBI of 44.1.

EXHIBIT 16



**Statistical Significance of CBR Test Results**

In mid-August 2014, CitiesBeautiful.org retained an independent statistician to test for statistically significant relationships in the test results of 453 people who had taken the Cities Beautiful Ranking test as of that date. More specifically, the statistician addressed these questions:

1. Are there any statistically significant relationships between the demographics of the test respondents in comparison with:
  - The scores they gave to each of the 15 Beautiful Facets? For example, do the scores of the 15 Beautiful Facets vary significantly between males and females, between older and younger people, etc.?
  - The respondents' education level?
  - The cities they cited as the most beautiful, and so on, as arrayed in the interactions chart?
2. Are there any statistically significant relationships between the scores of any two Beautiful Facets? For example, does the average score for Epiphany correlate statistically significantly with that of Mentoring?
3. For well-traveled respondents (i.e., who have traveled to at least eight countries), is there a statistically significant relationship between the scores they gave to the 15 Beautiful Facets and the Cities Beautiful Index (CBI) scores of Beautiful Facets for the city they cited as the most beautiful?
4. Overall:
  - Can any of the above analysis test results – taken individually or collectively – be taken as statistically significant evidence that the 15 Beautiful Facets are not just random concepts (the null hypothesis) but are in fact worth pursuing further?
  - Is there some other type of test that should have been/could be performed to more directly address the “overall purpose”?

Without at this time going into the rigorous details of the statistician’s findings, suffice it to say that numerous statistically significant relationships have been documented, thereby validating the Beautiful Facets methodology and laying the groundwork for further statistical research.

## 6. CONCLUSIONS

At the beginning of this document we posed these questions: San Francisco is “everyone’s favorite city” – but what makes San Francisco beautiful to each of us? How can we ensure that we are enjoying San Francisco’s beauty to the fullest? Moreover, could some of what we find beautiful about San Francisco also be recognized and appreciated in other cities around the world, including in our home towns? At a deeper level, what do our individual concepts of beauty reveal about our perceptions, our motivations, even our priorities in life?

We have now answered those questions, as follows:

- ★ We have been able to create a Beautiful Schema and corresponding 15 Beautiful Facets from a review, synthesis, and elaboration of the preeminent works of aesthetic philosophers, architects, city planners, behavioral psychologists, etc., over the last 2,600 years.
- ★ We have demonstrated empirical connections between tourist visitations and the 15 Beautiful Facets in San Francisco; as a corollary, San Francisco has multiple civic features in each of the 15 Beautiful Facets.
- ★ We have constructed a Civic Beauty Ranking (CBR) Test based on the 15 Beautiful Facets, that allows anyone to determine her/his preferences among the Beautiful Facets, that is, to clearly identify and understand our personal version of “beauty is in the eye of the beholder”.
- ★ We have also constructed a Cities Beautiful Index (CBI) for measuring each city’s overall civic beauty for numerical comparison to other cities; in the process of calculating the CBI, we also have scored each of the 15 Beautiful Facets for ready comparison to other cities on a Facet by Facet basis.
- ★ We have been informed that the Beautiful Facet methodology has merit based on independently-conducted statistical tests.
- ★ Each of us can utilize her/his CBR scores of the 15 Beautiful Facets and the CBI scores in prioritizing visits to the beautiful features of cities around the world, as presented at the CitiesBeautiful.org website – as well as anyplace else in the world.

Here is a final conclusion, not previously asserted. Arguably San Francisco is considered a beautiful city because of its broad coverage, its wealth of beautiful features, no matter which Beautiful Facets is examined. Stated differently, San Francisco offers something personally beautiful to everyone, no matter what that person’s particular CBR profile may be. Thus, the greater the number of the 15 Facets that are genuinely fulfilled by the civic features in a given city – that is, the greater the extent to which the city holds something for everyone, regardless of her/his particular “beauty in the eye of the beholder” – then the more widely recognized will be that city as “beautiful”.

\* \* \* \* \*










**In closing, armed with your new knowledge of what civic beauty means to you, now by all means immerse yourself in the rest of the CitiesBeautiful.org website for even greater, highly personalized understanding, appreciation, and enjoyment of civic beauty worldwide!**

ENDNOTES


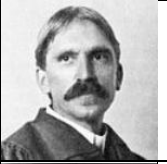






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**ADDENDUM I – BIOGRAPHIES OF WESTERN AESTHETIC PHILOSOPHERS ET AL.**





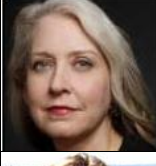


AUTHOR		CONTRIBUTIONS
	<p><b>Pythagoras</b> <i>Greek Philosopher</i></p> <p>569 BC - 475 BC</p>	<p>Pythagoras believed that beauty was associated with the ratio of small integers, based on research he conducted with musical instruments. He thereby initiated a movement of philosophers from Ancient Greece onward who believe that the world is beautiful because there is a mathematical proportion, order, balance, and especially harmony underlying everything from music to nature. Further, aesthetic experiences and exercises of reason are understood as a necessary process and training to cultivate the soul... Today, the observations of aesthetic philosophers are classified into two groups: PYTHAGOREAN -- those who recognize beauty through reason-based, contemplative experiencing of music, mathematical formulas, patterns in nature, so on; and PLEASURE-PRINCIPLE -- those who find beauty via the pleasures of the senses, including sights, sounds, tastes, etc.</p>
	<p><b>Plato</b> <i>Greek Philosopher</i></p> <p>427 BC - 347 BC</p>	<p>Beauty finds its most significant treatment in the <i>Symposium</i> in a speech by Socrates, in which a distinction is made between (a) the beauty of things and properties as perceived by our senses, and (b) The Beautiful itself – as Plato calls the external, unchanging, and divine form of Beauty, accessible not to the senses, but only to the intellect. For Plato, as stated in <i>Law Books II</i>, beauty had one main quality “<i>Apart from any pleasure art may give, its quality rests explicitly in its truth or rightness, i.e., its Measure (“equal proportions”), and should only be judged in terms of its Measure.</i>” As a corollary, Plato is adamant that <i>pleasure</i> is a completely unreliable way of evaluating beauty.</p>
	<p><b>Aristotle</b> <i>Greek Philosopher</i></p> <p>384 BC - 322 BC</p>	<p>In his <i>Metaphysica</i> Aristotle supports Pythagoras: “The chief forms of beauty are order and symmetry and definiteness, which the mathematical sciences demonstrate in a special degree.” In <i>Nicomachean Ethics</i> Aristotle adds this dimension: “<i>It is not possible either to take away or to add anything, implying that excess and defect destroy the goodness of works of art.</i>” Further afield, however, Aristotle maintains that beauty derives from the nature of the beautiful thing in question, and is context-dependent. In the <i>Rhetoric</i> he gives the example that a man’s beauty changes as he ages and has different functions. The beautiful young man is one who competes athletically; the beautiful man of middle age can frighten enemies in a battle; and the beautiful old man holds up against the insults of age.</p>
	<p><b>Marcus Vitruvius Pollio</b> <i>Roman Engineer and Architect</i></p> <p>70 BC? - 25 BC</p>	<p>In his one extant work, <i>De Architectura (“On Architecture”)</i>, Vitruvius discusses in ten encyclopedic chapters aspects of Roman architecture, engineering, and city planning. Because it is the only antique treatise on architecture to have survived, <i>De Architectura</i> has been an invaluable source of information over the centuries. For example, the work directly led to the revival of classicism during the Renaissance and subsequent periods. According to Vitruvius, architecture rests on a balance of three principles: <i>Beauty</i> [emphasis added], Firmness, and Utility.</p>
	<p><b>Saint Thomas Aquinas</b> <i>Italian Theologian and Philosopher</i></p> <p>1225 - 1274</p>	<p>In <i>Summa Theologiae</i>, Aquinas posits that beauty is a characteristic of the divine which we come to know through our experience of its manifestations on earth. He gives three distinguishing characteristics of beauty: wholeness or integrity, proportion or harmony, and – the principal characteristic – “claritas”, which can be translated splendor, light, brilliance, and especially radiance. Moreover, the beautiful illuminates our intellectual understanding of everything around us. (This is in contrast to theories that pleasure aroused by beauty is biological, i.e., associated with physical desires and satisfactions.)</p>
	<p><b>Francis Hutcheson</b> <i>British Philosopher</i></p> <p>1694 - 1746</p>	<p>Hutcheson argues in <i>Inquiry into the Origin of Our Ideas of Beauty and Virtue</i> that the pleasure of beauty comes not from our intellect but from our senses. Specifically, beauty is discovered in a “compound” of the qualities of uniformity and variety. He sometimes substitutes “order” and “regularity” for “uniformity”, and treats “complexity” as synonymous with “variety.” Generally speaking, then, we derive the pleasure of beauty from objects to the extent that we perceive complex order within them.</p>
	<p><b>William Hogarth</b> <i>English Painter and Printmaker</i></p> <p>1697 - 1764</p>	<p>In his book <i>The Analysis of Beauty</i>, Hogarth summarizes a lifetime of artistic and aesthetic insights. Excerpts: “VARIETY – How great a share variety has in producing beauty may be seen in the ornamental part of nature. All the senses delight in it, and equally are averse to sameness...INTRICACY – It is a pleasing labour of the mind to solve the most difficult problems; allegories and riddles. The eye hath this sort of enjoyment in winding walks, and serpentine rivers...QUANTITY – Forms of magnitude, although ill-shaped, will however, on account of their vastness, draw our attention and raise our admiration. [For example] high grown trees, great churches, and palaces.”</p>
	<p><b>David Hume</b> <i>Scottish Philosopher</i></p> <p>1711 - 1776</p>	<p>In contrast to Hutcheson and other contemporaries, Hume argues in his book <i>Of the Standard of Taste</i> that the pleasure of beauty involves both senses and reason, and takes not just one but many forms in objects. Moreover, appreciating beauty requires the development of “taste”, which nearly everyone can achieve with appropriate training. (Just as a person with a bad cold cannot truly judge the quality of a meal, an inexperienced person cannot truly judge art.) Hume catalogs and describes the defects that prevent our taking pleasure in works “fitted by nature” to please us.</p>

	<p><b>Immanuel Kant</b> <i>German Philosopher</i></p> <p>1724-1804</p>	<p>Kant's <i>Critique of Judgment</i> can be considered the foundation of modern aesthetic philosophy. Kant says experiencing beauty is a two-part process. First, we perceive the form of the object by using our judgment (involving both imagination and understanding). Second, we acknowledge the beauty of an object via the feeling of pleasure of the harmony of our abilities and awareness of our mental state. That is, we experience beauty "not as a thought, but as an internal feeling of a purposive state of the mind." Moreover, the pleasure is not egocentric. The pleasure of beauty is like perceiving a solution to a problem and enjoying it for its own sake, or even discovering some profound truth about the nature of being – which in turn is deeply pleasurable.</p>
	<p><b>Pierre Charles L'Enfant</b> <i>French and American Architect, Civil Engineer, and City Planner</i></p> <p>1754 - 1825</p>	<p>Commissioned by President George Washington, L'Enfant's plan for Washington D.C. is based on principles employed by Domenico Fontana in re-planning of Rome under Pope Sixtus V (1585); on concepts embraced by Andre Le Notre in the palace and garden of Versailles (1661 onward); and on baroque traditions of design used in transforming Paris. The plan was intended to be both a model for American city planning and a symbol to other nations of the emerging governmental power of the United States.</p>
	<p><b>Georg Wilhelm Friedrich Hegel</b> <i>German Philosopher</i></p> <p>1770 - 1831</p>	<p>Over history human beings gradually expand and deepen their knowledge of themselves and their world, just as self-knowledge develops by stages over time. Art plays a part in the development of the mind from infancy to adulthood. Hegel is interested in art's role in the development of mind throughout history. Hegel is therefore concerned with the beauty of art, but not the beauty of nature. Famously, in his renowned <i>Lectures on Aesthetics</i> (1818-1821) he announced "the death of art" – that is, art can no longer be a proper vehicle for humanity's comprehension of its own essence.</p>
	<p><b>John Keats</b> <i>English Poet</i></p> <p>1795 - 1821</p>	<p>Keats was one of the main figures of the second generation of English romantic poets despite his work only having been in publication for four years before his death. He devoted his short life to the perfection of poetry marked by vivid imagery, great sensuous appeal and an attempt to express a philosophy through classical legend.</p>
	<p><b>Ralph Waldo Emerson</b> <i>American Essayist, Lecturer, and Poet</i></p> <p>1803 - 1882</p>	<p>Emerson was a central member of the Transcendentalist cultural movement, which emphasized individual spiritual potential and humankind's unity with nature. His essays and poems are major documents in 19th-century American literature and thought.</p>
	<p><b>William James</b> <i>American Philosopher, Psychologist and Academic</i></p> <p>1842 - 1910</p>	<p>James was a philosopher and psychologist who had trained as a physician. He was the first educator to offer a psychology course in the United States. James wrote influential books on pragmatism, psychology, educational psychology, the psychology of religious experience, and mysticism.</p>
	<p><b>Camillo Sitte</b> <i>Austrian Architect, Art Historian, and City Planning Theoretician</i></p> <p>1843 - 1903</p>	<p><i>City Planning According to Its Artistic Principles</i>, Sitte's 1889 treatise on the basic questions of urban planning, was extremely well received and resulted in numerous planning ordinances throughout Europe. Architects and urban planners rediscovered Sitte's importance in the 1970s. Sitte proposed urban designs based on analyses of historic city plans. His favorite models were medieval and Baroque cities, whose streets were broken up by monuments, squares, or other visual obstacles.</p>
	<p><b>Daniel Burnham</b> <i>American Architect and City Planner</i></p> <p>1846 – 1912</p>	<p>Burnham is arguably the father of the City Beautiful movement, which was first personified in the "White City" at the 1893 World's Columbian Exposition in Chicago. The City Beautiful movement, during its heyday from about 1900 to 1910, represented the epitome of city planning and architectural cohesion, and influenced design and planning in every American city from Washington, DC to San Francisco. Americans attempted to refashion their cities into beautiful, functional entities, encompassing a cultural agenda, a middle-class environmentalism, and aesthetics expressed as beauty, order, system and harmony. Public and semipublic buildings, civic centers, park and boulevard systems, or extensions and embellishments of them, were the tokens of the improved environment. So were ordinary street improvements, including good paving, attractive furniture such as lampposts, and carefully selected and maintained trees. Aesthetically, it blended naturalistic and classic forms, an important European legacy.</p>
	<p><b>Ebenezer Howard</b> <i>British City Planner</i></p> <p>1850 - 1928</p>	<p>Howard read widely and thought deeply about urban social issues, and out of concern came his book in 1898 titled <i>To-Morrow: A Peaceful Path to Real Reform</i>, reprinted in 1902 as <i>Garden Cities of To-Morrow</i>. This book called for the creation of new suburban towns of limited size, planned in advance, and surrounded by a permanent belt of agricultural land. His ideas attracted enough attention and financial backing to begin Letchworth, a garden city in suburban London. A second garden city, Welwyn, was started after World War I. These towns led to the development of "New Towns" after World War II by the British government. This movement produced more than 30 communities in the United States as well as England. His ideas also inspired many other planners, such as Frederick Law Olmstead II.</p>



	<p><b>Louis Sullivan</b> <i>American Architect</i></p> <p>1856 - 1924</p>	<p>Sullivan is widely considered America's first truly modern architect and the father of the modern skyscraper, was a major contributor to the "White City" that initiated the City Beautiful movement, and was a mentor to Frank Lloyd Wright (who referred to him as Lieber Meister – "beloved master"). He admired rationalist thinkers like Thoreau, Emerson, and Whitman. His famous credo is "form follows function," that is, that the shape of a building or object should be primarily based upon its intended function or purpose.</p>
	<p><b>John Dewey</b> <i>American Philosopher, Psychologist and Academic</i></p> <p>1859 – 1952</p>	<p>Dewey's ideas have been influential in education and social reform. He was one of the founders of functional psychology, and a major representative of progressive education and liberalism. Although Dewey is known best for his publications concerning education, he also wrote about many other topics, including experience, nature, art, logic, and ethics.</p>
	<p><b>Robert Park</b> <i>American Sociologist and Academic</i></p> <p>1865 – 1944</p>	<p>Park was an urban sociologist who is considered to be one of the most influential figures in early U.S. sociology. He played a leading role in the development of the Chicago School of sociology. Park is noted for his work in human ecology.</p>
	<p><b>Frank Lloyd Wright</b> <i>American Architect and City Planner</i></p> <p>1867 – 1959</p>	<p>Broadacre City was Frank Lloyd Wright's Utopian vision of the physical, economic, democratic, and of course architectural landscape of America. This design presupposed that the city was going to the country, would typically encompass four square miles, and would totally decentralize the American urban landscape. Studying the landscape of Broadacre City would be "Usonian" houses and solitary skyscrapers of Wright's design, and a wide variety of buildings needed to service the community. The plan was never implemented anywhere, but it did foreshadow the decentralization that occurred after World War II.</p>
	<p><b>Ethel Puffer Howes</b> <i>American Philosopher, Psychologist and Academic</i></p> <p>1872 - 1950</p>	<p>Puffer's academic career in the field of psychology included professorships at Wellesley, Smith, and Simmons. Her doctoral thesis was published in 1905 as <i>The Psychology of Beauty</i>. In her book, she comprehensively examines and merges the fields of aesthetic philosophy and psychology. "I believe the way is at last opened from the traditional philosophy of aesthetics to a healthy and concrete psychological theory. Our philosophical definition of Beauty has thus taken final shape. The beautiful object possesses those qualities which bring the personality into a state of unity and self-completeness. Thus the Nature of Beauty is in the relation of means to an end; the means, the possibilities of stimulation in the motor, visual, auditory, and purely ideal fields; the end, a moment of perfection, of self-complete unity of experience, of favorable stimulation with repose. Beauty is not perfection; but the beauty of an object lies in its permanent possibility of creating the perfect moment. The experience of this moment, the union of stimulation and repose, constitutes the unique aesthetic emotion."</p>
	<p><b>Le Corbusier</b> <i>Swiss Architect and City Planner</i></p> <p>1887 - 1965</p>	<p>From Plato, Corbusier extracted a rejection of realist representations and a concentration on getting at the true nature of an object, without ornament of any kind. The true forms were geometric, stylized shapes and figures. Le Corbusier dominated the architectural world, from 1920 until his death in 1965. He inspired several generations of architects not only in Europe but around the world. He was also a city planner. "Modern town planning comes to birth with a new architecture," he wrote in a book titled simply <i>Urbanisme</i>. People would live in hygienic, regimented high-rise towers, set far apart in a park like landscape. This rational city would be separated into discrete zones for working, living and leisure. Above all, everything should be done on a big scale— big buildings, big open spaces, big urban highways. He called it <i>La Ville Radieuse</i>, the Radiant City. Automobile traffic was to circulate on pilotus supported roadways five meters above the earth. The entire ground was given as a "gift" to pedestrians. Legacies of the Radiant City can be found in Chandigarh, India; Brasilia, Brazil; and various urban-renewal projects in the United States, including Golden Gateway Center in downtown San Francisco.</p>
	<p><b>Lewis Mumford</b> <i>American Historian, Sociologist and Literary Critic</i></p> <p>1885 – 1990</p>	<p>Mumford was internationally renowned for his decades of writings on cities, architecture, technology, literature, and modern life. Among his many awards was the Presidential Medal of Freedom. From his landmark book <i>The City in History</i>: "If we are to create balanced human beings, capable of entering into worldwide cooperation with all other men of good will – and that is the supreme task of our generation, and the foundation of all its other potential achievements – we must give as much weight to the arousal of the emotions and to the expression of moral and <i>esthetic values</i> [emphasis added] as we now give to science, to invention, to practical organization. One without the other is impotent."</p>
	<p><b>Louis Wirth</b> <i>American Sociologist</i></p> <p>1897 - 1952</p>	<p>In <i>Classic Essays on the Culture of Cities</i>, Wirth explains the reasons behind differentiated urban neighborhoods. "Persons of homogeneous status and needs unwittingly drift into, consciously select, or are forced by circumstances in the same area. The different parts of the city acquire specialize functions, and the city consequently comes to resemble a mosaic of social worlds in which the transition from one to the other is abrupt."</p>

	<p><b>Abraham Maslow</b> <i>American Psychologist and Academic</i></p> <p>1908 - 1970</p>	<p>In his books <i>A Theory of Human Motivation</i> and <i>Motivation and Personality</i>, Maslow posited a hierarchy of human needs based on two groupings: "deficiency needs" and "growth needs". Within the deficiency needs, each lower need must be met before moving to the next higher level. Once each of these needs has been satisfied, if at some future time a deficiency is detected, the individual will act to remove the deficiency. According to Maslow, an individual is ready to act upon the growth needs if and only if the deficiency needs are met. Maslow's initial conceptualization included only one growth need—self-actualization. Maslow later differentiated the growth need of self-actualization, specifically naming two lower-level growth needs prior to general level of self-actualization and one beyond that level: One of those subsequently defined growth needs was Aesthetics.</p>
	<p><b>James Marston Fitch</b> <i>American Architect, Preservationist and Academic</i></p> <p>1909 - 2000</p>	<p>Fitch asserted that all architects aspire to give their clients beautiful buildings -- but "beauty" is not a discrete property of the building. Beauty describes, rather, the client's response to the building's impact upon him. Thus the aesthetic enjoyment of an actual building cannot be merely a matter of vision, but must indeed be a matter of total sensory perception. The seven biological perceptual mechanisms are visual, auditory, gustatory, olfactory, haptic, proprioceptive (vestibular), structural system (gravitational).</p>
	<p><b>Edmund Bacon</b> <i>American City Planner</i></p> <p>1910 - 2005</p>	<p>One of the most prominent city planners of his time, Bacon wrote in his book <i>Design of Cities</i> that the building of cities is one of man's greatest achievements. "Awareness of space goes far beyond cerebral activity; it engages the full range of senses and feelings, requiring involvement of the whole self to make a full response to it possible...The city is a people's art, a shared experience...Through a sense of connection with a system greater than himself man achieves aesthetic satisfaction."</p>
	<p><b>Paul MacLean</b> <i>American Physician and Neurologist</i></p> <p>1913 - 2007</p>	<p>(1990) MacLean made significant contributions in the fields of physiology, psychiatry, and brain research through his work at Yale Medical School and the National Institute of Mental Health. As posited in his book <i>The Triune Brain in Evolution</i>, humans have three distinct brains rather than just one. Each of the three brains embodies an evolutionary stratum that has formed upon the older layer before it, like an archaeological site. He defines the three as the neocortex or neo-mammalian brain, the limbic or paleo-mammalian system, and the reptilian brain. Though connected by nerves to the other two, each brain operates as its own system with distinct capacities.</p>
	<p><b>Jane Jacobs</b> <i>Journalist, American City Planning Activist</i></p> <p>1916 - 2006</p>	<p>Her <i>The Death and Life of Great American Cities</i> as been one of the most influential urban planning texts of the 20<sup>th</sup> century. Jacobs maintains that modern city planning has been burdened from its beginnings with the unsuitable aim of converting cities into disciplined works of art. Instead of attempting to substitute art for life, city designers should return to a strategy that is ennobling both to art and to life. Although art and life are interwoven, they are not the same things; confusion between them is, in part, why efforts at city design are so disappointing. Only intricacy and vitality of use give to a city appropriate structure and shape. The emphasis must be on the bits and pieces that truly comprise a city.</p>
	<p><b>Kevin Lynch</b> <i>American City Planner and Academic</i></p> <p>1918 - 1984</p>	<p>As an MIT professor and practicing consultant, Lynch provided seminal contributions to the field of city planning through empirical research on how individuals perceive and navigate the urban landscape – and how to use that information to improve city planning and urban design. His best known book is <i>The Image of the City</i>. "Imageability" is that quality in a physical object which gives it a high probability of evoking a strong image in any given observer. It is that shape, color or arrangement which facilitates the making of vividly identified, powerfully structured, highly useful mental images of the environment. Certain features – open space, vegetation, sense of motion on the paths, visual contrasts – seemed to be of particular importance to the cityscape. These findings might be generalized in the following hypothesis: The individual must perceive his environment as an order pattern, and is constantly trying to inject order into his surroundings, so that all the relevant perceptions are jointed one to the other.</p>
	<p><b>Ronald Hepburn</b> <i>Scottish Philosopher and Academic</i></p> <p>1928 - 2008</p>	<p>Hepburn was a pioneer in the field of philosophical aesthetics. His groundbreaking 1966 paper, "Contemporary Aesthetics and the Neglect of Natural Beauty," founded a whole new area of inquiry for philosophers by challenging them to devote as much attention to nature as to art.</p>
	<p><b>Oscar Newman</b> <i>American Architect and City Planner</i></p> <p>1935 - 2004</p>	<p>Newman's <i>Design Guidelines for Creating Defensible Space</i> is one of the principal texts on Crime Prevention Through Environmental Design (CPTED). The term describes a residential environment whose physical characteristics – building layout and site plan – allow inhabitants to ensure their own security. The physical elements that are used to create defensible space foster a sense of territoriality and community among inhabitants, stimulating their taking responsibility for preserving a safe living environment.</p>

	<p><b>Clayton Alderfer</b> <i>American Psychologist and Academic</i></p> <p>1940 -</p>	<p>Alderfer is a psychologist who further developed Maslow's hierarchy of needs by categorizing the hierarchy into his ERG theory (Existence, Relatedness and Growth). Alderfer also proposed a regression theory to go along with the ERG theory, positing that when needs in a higher category are not met then individuals redouble the efforts invested in a lower category need.</p>
	<p><b>Peter Neill</b> <i>American Preservationist and Academic</i></p> <p>1941 -</p>	<p>Previously President of the South Street Seaport Museum from 1985-2005, Neill is the current Director of the World Ocean Observatory. He has always been a strong proponent of maritime education.</p>
	<p><b>Eugene Mathes</b> <i>American Psychologist and Academic</i></p> <p>1951 -</p>	<p>Dr. Mathes' research interests focus on physical attractiveness, romantic love, romantic jealousy, sexual coercion, etc. As an organizing framework, he uses evolutionary psychology.</p>
	<p><b>Steven Schloeder</b> <i>American Theologian and Architect</i></p> <p>1960 -</p>	<p>In his book <i>A Return to Humane Architecture</i>, Schloeder states that architecture is "...the fine art of designing buildings for both the body and soul...in addition to providing for the utilitarian and functional needs, its end is the making of something beautiful. That which is to be made is a building, a building which not only houses and protects and accommodates the body, our physicality, but one that is intended to nourish our soul with meaning, symbolic content, and beauty."</p>
	<p><b>Virginia Postrel</b> <i>American Journalist</i></p> <p>1960 -</p>	<p>In her book <i>The Substance of Style</i>, Postrel reveals that the twenty-first century has become the age of aesthetics. Aesthetic pleasure taps deep human instincts and is essential for creativity and growth. Drawing from fields as diverse as fashion, real estate, politics, design, and economics, Postrel chronicles our culture's aesthetic imperative and argues persuasively that it is a vital component of a healthy, forward-looking society.</p>
	<p><b>Jennifer McMahon</b> <i>Australian Philosopher and Academic</i></p> <p>1968 -</p>	<p>Dr. McMahon supervises honors and post-graduate students in philosophy – aesthetics, neo-pragmatism, philosophy of art – and in art history/theory of art. Her upper level courses are Beauty: Pleasures and Principles and Philosophy of Art.</p>
	<p><b>Alain De Botton</b> <i>Swiss/British Architect and Philosopher</i></p> <p>1969 -</p>	<p>His books and television programs discuss various contemporary subjects and themes, emphasizing philosophy's relevance to everyday life. Of particular relevance here is his best-selling book <i>In The Architecture of Happiness</i>, in which de Botton discusses the nature of beauty in architecture and how it is related to the well-being and general contentment of the individual and society.</p>

**ADDENDUM II – CONSIDERATION OF EASTERN AESTHETICS**

The focus of CitiesBeautiful.org currently is on Western *a.k.a.* Occidental concepts of beauty. In the future the website might also encompass Eastern *a.k.a.* Oriental concepts. For now, here are a few brief comments on possibilities for assimilating Eastern/Oriental concepts into this document’s discussions of the Beautiful Schema and Beautiful Facets<sup>1</sup>.

Eastern/Oriental aesthetics consist largely of Chinese, Indian, and Middle Eastern aesthetics. (Until the last 200 years or so, Japanese aesthetics was not seen as a distinct philosophical pursuit as in China et al., but rather as an inseparable part of daily existence.)

In marked contrast to Western/Occidental secular aesthetics, Eastern/Oriental aesthetics are religion-centric.

- Chinese aesthetics derive principally from Daoism and Confucianism. These traditions focus extensively on the relationship between humans and [Mother] Nature.
- Indian aesthetics, encompassing Hinduism and Buddhism, are almost entirely concerned with spiritual matters, especially as manifested in a series of “rasas”.
- Middle Eastern aesthetics stem from Islam, which proscribes representational imagery. The art forms that have evolved accordingly consist largely of geometric patterns, arabesques, and abstract forms.

Arguably, though at present simplistically speaking, the three branches of Eastern/Oriental aesthetics fit into the Beautiful Schema and Beautiful Facets as shown in the following expanded version of previously presented Exhibit 6.

WESTERN / OCCIDENTAL PHILOSOPHERS ET AL.			EASTERN / ORIENTAL AESTHETICS	HUMAN BRAIN	BEHAVIORAL PSYCHOLOGISTS			THE 15 RESULTING BEAUTIFUL FACETS
CLASSICAL	AESTHETES, ARCHITECTS, PLANNERS, ETC.	“COMMON THREADS”			JAMES... MATHES... ALDERFER	MASLOW	TRADITIONAL (RED) PLUS THE AUTHOR'S (PURPLE) COMPONENTS OF THE “HIERARCHY OF NEEDS”	
Faith (Non-Provable)	Plato, Aquinas, Shelling, Hegel, Emerson, Kats, Schioder	Divinity, Perfection, Truth	Indian (Hinduism, Buddhism)	Spiritual Being		Transcendence	Need to connect to something beyond the ego...including the knowable and unknowable	Epiphany
	Aristotle, Hogarth, Le Corbusier, Sullivan	Fitness, Purposefulness					Need to help others find self-fulfillment and realize their potential	Mentoring
Pythagorean (Reason)	Pythagoreans, Aristotle, Hogarth, Kant	Symmetry, Proportion	Middle Eastern (Islam)	Neocortex / Intellectual Being	Spiritual... Self-Actualization... Growth	Self-Actualization	Need for growth, development and utilization of potential, becoming what one must be	Self Fulfillment
	Hogarth, Hutchinson, Lynch, Bacon, Kant	Order within Diversity and Complexity				Aesthetics	Need for beauty in surroundings...symetry, order, balance	Elegance
Pleasure Principle (Senses)	Hogarth, L'Enfant, Burnham et al., Mumford	Monumental, Inspirational, Majestic		Mammalian / Emotional Being	Social... Belongingness... Relatedness	Understanding and Knowledge	Need for novelty, uniqueness, invention (inductive reasoning)	Originality
	Siza, Burnham et al., Park, Wirth, Jacobs, Bacon, Neil, Mumford	Social Connection, Communal Expression, Cultural Continuity				Self-Esteem	Need to satisfy curiosity, explore, find solutions, look for relationships and meaning (deductive reasoning)	Revelation
	Vitruvius, Kant, Howard, Wright, Dewey, Hepburn	The Natural Environment	Chinese (Daoism, Confucianism)			Love and Belonging	Need for respect - from others - acceptance, recognition, prestige, reputation, appreciation, status	Grandeur
	Newman	Stimulation of the Senses				Safety	Need for self-respect - confidence, competence, adequacy, achievement, mastery	Selfhood
	Hume, Puffer, Fitch, Bacon, McMahon, Postra			Reptilian / Physical Being		Physiological	Need for connections to the past	Chronicle
							Need for love and affectionate relationships, belonging to a group, caring	Kinship
							Need for an affinity with the natural environment	[Mother] Nature
							Need to be safe from harm, a predictable world, consistency, fairness, routine, stability, security	Surety
							Need for multiple senses to amplify the impact of experiences	Synergy
							Need for movement-based stimulation; objects in motion, changes by time of day, seasons of the year, etc.	Dynamism
							Need for air, water, food, warmth and shelter, sleep, sex	Sensation

(1) The main sources for Addendum II are <http://en.wikipedia.org/wiki/Aesthetics>, [www.newworldencyclopedia.org/entry/Aesthetics](http://www.newworldencyclopedia.org/entry/Aesthetics), [http://en.wikipedia.org/wiki/Japanese\\_aesthetics](http://en.wikipedia.org/wiki/Japanese_aesthetics), [http://en.wikipedia.org/wiki/Indian\\_aesthetics](http://en.wikipedia.org/wiki/Indian_aesthetics), etc.

**ADDENDUM III – CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) OF EACH CITY**

As explained previously, each city’s overall CBI and component Beautiful Facets are scored using this process:

- For each of the Beautiful Facets, a city’s three best Principle Features are identified based on various third-party sources and the author’s personal experience. A city might have more than three Principle Features for a given Beautiful Facet, but only the top three are considered. The number of Principle Features to be included in the CBI calculation is thus 3 x 15 = 45 Principle Features.
- Each of the Principle Features is rated by the author on a scale of 1 to 3, broadly speaking as follows:
  - 3 = World Renowned
  - 2 = Well Known and/or Very Special
  - 1 = Not So Well Known But Nonetheless Special
- The scores of the three Principle Features for each Beautiful Facet are then summed.
- For each of the 15 Beautiful Facets, the number of Honorable Mentions is also counted. This number (up to a maximum of 4 Honorable Mentions) is added to the previous sum of the Principle Features.
- The combined score of the Principle Features and Honorable Mentions for each of the 15 Beautiful Facets is normalized on a scale of 1 to 100.
- The overall CBI is the average of the normalized scores for the 15 Beautiful Facets.

The table below provides the scores of each Beautiful Facet for each of the 20 cities initially evaluated at CitiesBeautiful.org. The bottom row of the table shows each city’s overall Cities Beautiful Index (CBI). Note that the table highlights which cities have the highest score for each Beautiful Facet.

	Amsterdam	Athens	Barcelona	Budapest	Buenos Aires	Cape Town	Fez	Hong Kong	Istanbul	Jaipur	Jerusalem	Kyoto	Paris	Rio De Janeiro	Rome	San Francisco	St. Petersburg	Sydney	Vancouver	Washington DC
Epiphany	76.9	53.8	53.8	69.2	69.2	46.2	92.3	69.2	84.6	69.2	92.3	92.3	69.2	46.2	76.9	46.2	53.8	69.2	53.8	69.2
Mentoring	84.6	84.6	61.5	69.2	69.2	53.8	53.8	53.8	61.5	46.2	53.8	53.8	100.0	53.8	76.9	61.5	69.2	69.2	53.8	84.6
Self-Fulfillment	53.8	61.5	69.2	76.9	92.3	69.2	30.8	53.8	69.2	61.5	53.8	69.2	69.2	38.5	61.5	46.2	69.2	46.2	46.2	92.3
Elegance	53.8	84.6	61.5	46.2	46.2	30.8	46.2	53.8	76.9	46.2	53.8	84.6	76.9	46.2	46.2	69.2	53.8	30.8	38.5	53.8
Originality	61.5	38.5	100.0	53.8	53.8	38.5	61.5	46.2	61.5	69.2	38.5	76.9	53.8	53.8	53.8	69.2	69.2	46.2	69.2	53.8
Revelation	69.2	38.5	69.2	46.2	53.8	69.2	38.5	46.2	38.5	30.8	30.8	46.2	61.5	53.8	61.5	46.2	61.5	38.5	61.5	61.5
Grandeur	46.2	53.8	53.8	53.8	61.5	38.5	30.8	46.2	69.2	46.2	30.8	61.5	69.2	61.5	69.2	61.5	61.5	46.2	23.1	84.6
Selfhood	30.8	46.2	46.2	38.5	53.8	61.5	46.2	46.2	53.8	46.2	46.2	46.2	84.6	46.2	46.2	69.2	38.5	46.2	53.8	46.2
Chronicle	69.2	92.3	30.8	46.2	69.2	61.5	84.6	61.5	92.3	30.8	53.8	46.2	53.8	53.8	76.9	69.2	69.2	76.9	76.9	69.2
Kinship	61.5	53.8	46.2	61.5	53.8	53.8	30.8	53.8	38.5	46.2	61.5	61.5	61.5	46.2	61.5	100.0	38.5	30.8	30.8	53.8
Nature	53.8	38.5	61.5	61.5	69.2	84.6	30.8	46.2	53.8	69.2	38.5	61.5	76.9	61.5	69.2	46.2	61.5	61.5	84.6	61.5
Surety	38.5	46.2	23.1	30.8	38.5	53.8	38.5	38.5	76.9	69.2	46.2	46.2	38.5	53.8	53.8	69.2	53.8	46.2	30.8	76.9
Synergy	53.8	30.8	30.8	46.2	61.5	38.5	30.8	46.2	69.2	46.2	46.2	76.9	46.2	46.2	30.8	61.5	53.8	46.2	53.8	61.5
Dynamism	38.5	30.8	38.5	38.5	23.1	38.5	23.1	69.2	46.2	30.8	30.8	53.8	46.2	53.8	23.1	53.8	38.5	46.2	53.8	30.8
Sensation	38.5	38.5	69.2	61.5	46.2	61.5	23.1	61.5	38.5	30.8	61.5	53.8	53.8	53.8	23.1	61.5	30.8	53.8	61.5	38.5
OVERALL CBI	55.4	52.8	54.4	53.3	57.4	53.3	44.1	52.8	62.1	49.2	49.2	62.1	64.1	51.3	55.4	62.1	54.9	50.3	52.8	62.6

*Highest score* among all 20 cities for each Beautiful Facet, e.g., Fez, Jerusalem and Kyoto had the highest score for Epiphany (92.3).

On the following pages are the detailed calculations for each of the 20 cities.

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>AMSTERDAM</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Old Church (Oude Kerk)	2	St. Nicholas (Sint-Nicolaaskerk)	2	Our Lord in the Attic (Ons' Lieve Heer op Solder)	2	6	4	76.9
Mentoring	Rijksmuseum	3	Stedelijk Museum	3	Maritime Museum (Scheepvaartmuseum)	2	8	3	84.6
Self-Fulfillment	Royal Palace (Koninklijk Paleis)	2	Concertgebouw	2	Music Building on the IJ (Muziekgebouw aan 't IJ) Including Bimhuis	2	6	1	53.8
Elegance	<i>Especially Noteworthy Canals/Streets -- Herengracht, Brouwersgracht, Keizersgracht, Oude Schans, etc.</i>	3	Magna Plaza (Postkantoor)	2	Blue Bridge (Blauwbrug)	1	6	1	53.8
Originality	Red Light District (De Wallen)	3	Skinny Bridge (Magere Brug)	2	Cinema Museum (Filmmuseum) aka Eye Film Institute	1	6	2	61.5
Revelation	Van Gogh Museum	3	Rembrandt House (Museum Het Rembrandthuis)	2	NEMO Science Center	2	7	2	69.2
Grandeur	<i>Grand Squares -- Dam, Rembrandtplein, Leidseplein, etc.</i>	3	Central Station (Centraal Station)	1	Maison de la Navigation	1	5	1	46.2
Selfhood	Westergasfabriek (Cultural Center)	1	The National Monument	1	<i>Lifestyle Museums -- Hash Marihuana &amp; Hemp Museum, Sexmuseum, Erotic Museum</i>	1	3	1	30.8
Chronicle	Amsterdam History Museum	2	Beguine Community (Begijnhof)	2	<i>Period Homes -- Museum Willet-Holthuysen, Museum Van Loon, Herengracht, n° 475, The Cromhout Houses (Cromhouthuizen)</i>	2	6	3	69.2
Kinship	Anne Frank House (Anne Frankhuis)	3	Jewish Historical Museum (Joods Historisch Museum)	2	<i>Neighborhoods - Nieuwe Zijde, De Plantage, Jordaan, Hollandse Schouwburg, Leidsestraat, De Pijp</i>	2	7	1	61.5
Nature	Vondelpark	2	Royal Zoo, Aquarium, Insectarium, etc. (Artis)	2	Botanical Garden (Hortus Botanicus)	1	5	2	53.8
Surety	Resistance Museum (Verzetsmuseum)	2	<i>Defensive Towers -- Mint Tower (Munttoren), Montelbaanstoren, Tower of Weeping Women (Schreierstoren)</i>	1	St Anthony's Gate (St-Anthoniespoort or Waag)	1	4	1	38.5
Synergy	Heineken Experience (Heineken-brouwerij)	2	Flower Market (Bloemenmarkt)	2	300+ Festivals Annually - e.g., <i>Amsterdam Open Air</i>	2	6	1	53.8
Dynamism	Canal Tours By Boat	2	Canal Hop-On-Hop-Off Routes (e.g., offered by Rederij Lovers)	1	Public Trams and Ferrys (GVB)	1	4	1	38.5
Sensation	<i>Open Air Markets -- Albert Cuypmarkt, Nieuwmarkt, Vlooiënmarkt, Antiekmarkt, Noordermarkt, etc.</i>	2	<i>Panoramas from Church Towers -- Westerkerk, Zuiderkerk, Oude Kerk</i>	1	Tulip Museum	1	4	1	38.5
<b>RESULTING OVERALL CBI SCORE =</b>									<b>55.4</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>ATHENS</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Byzantine and Christian Museum	2	Little Mitropolis Church	1	Kapnikarea Church	1	4	3	53.8
Mentoring	Acropolis Museum	3	National Archeological Museum	3	Benaki Museum	2	8	3	84.6
Self-Fulfillment	Odeum of Herodes Atticus	3	Panathenaic (Olympic) Stadium	2	Parliament House	1	6	2	61.5
Elegance	The Parthenon	3	The Erechtheion	3	Temple of Athena Nike	3	9	2	84.6
Originality	Tower of the Winds	2	Numismatic Museum	1	Ilias Lalaounis Jewelry Museum	1	4	1	38.5
Revelation	Museum of Popular Greek Instruments	2	Herakleidon Museum [Escher Collection]	1	Museum of Science and Technology at the University of Athens	1	4	1	38.5
Grandeur	The Acropolis	3	Mount Lycabettus (aka Lycabettos, Lykabetos or Lykavittos)	2	Temple of Hephaestus (aka Theseion/Hepasiston)	2	7	0	53.8
Selfhood	Syntagma and Kolonaki Squares	2	Foundation of the Hellenic World aka Hellenic Cosmos	1	Greek Folk Art Museum	1	4	2	46.2
Chronicle	Theater of Dionysos	3	Temple of Olympian Zeus	3	Keramikos Cemetery	2	8	4	92.3
Kinship	Neighborhoods -- Plaka, Anafiotika, Kolonaki , Koukaki etc.	3	Nightlife Districts -- Psirri and Gazi	2	Jewish Museum	1	6	1	53.8
Nature	National Garden	1	Zappeion Park	1	Plain of Mars	1	3	2	38.5
Surety	Tomb of the Unknown Soldier and the Changing of the Guard	2	War Museum	2	(Greek cruiser) Georgios Averof Museum	1	5	1	46.2
Synergy	Festivals -- Athens-Epidavros Festival, Athens International Dance Festival, Rockwave Festival, etc.	2	Dora Stratou Greek Dances Theatre	1	Allou Fun Park	1	4	0	30.8
Dynamism	Grand Promenade	2	Popular Bicycle Routes	1	Trams (especially to Coast)	1	4	0	30.8
Sensation	Panoramas --- Mt. Lycabettus, Filopappou/Philopappos Hill	2	Central Market along Athinas Street	1	Beaches - Agios Kosmas, Asteras Glyfada, Voula, Astir Beach, etc.	1	4	1	38.5
<b>RESULTING OVERALL CBI SCORE =</b>									<b>52.8</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>BARCELONA</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Catedral de Barcelona	2	Sant Pau del Camp	2	Monestir de Pedralbes	1	5	4	53.8
Mentoring	Museu Nacional d'Art de Catalunya	2	Univesity of Barcelona	1	Museu Marítim	2	5	4	61.5
Self-Fulfillment	Olympic Park	3	Gran Teatre del Liceu	2	Nou Camp	3	8	4	69.2
Elegance	Església de Santa Maria del Mar	2	Mies van der Rohe Pavilion	2	Hospital de Santa Creu i de Sant Pau	3	7	2	61.5
Originality	La Sagrada Família	3	Palau de la Música Catalana	3	La Pedrera (Casa Milà)	3	9	2	100.0
Revelation	CosmoCaixa (Museu de la Ciència)	2	Picasso Museum	3	Fundació Joan Miró	3	8	2	69.2
Grandeur	Plaza de Toros Monumental	2	Edifici Fòrum aka Museu Blau, with Torre Diagonal Zero Zero	1	Mirador de Colón	2	5	2	53.8
Selfhood	La Diada Nacional de Catalunya (National Day of Catalonia)	1	Passeig de Gràcia	1	Centre de Cultura Contemporània de Barcelona	1	3	2	46.2
Chronicle	Museu d'Història de la Ciutat and Palau Reial Major	2	Museu d'Història de Catalunya	1	Poble Espanyol	1	4	3	30.8
Kinship	El Raval (and less so El Born et al.)	3	Festes de la Mercè (Festival of Our Lady of Mercy)	2	Festival de Sant Joan (Saint John the Baptist) 23/24th June	1	6	1	46.2
Nature	Parc Güell	3	Parc de la Ciutadella	1	L'Aquarium de Barcelona	2	6	3	61.5
Surety	Museu Militar de Montjuïc	1	Roman Walls at Plaça Ramón Berenguer et al.	1	Turo de la Rovira	1	3	1	23.1
Synergy	Magic Fountain of Montjuïc	2	Parc d'Atraccions Tibidabo	1	Flemenco Performances	1	4	2	30.8
Dynamism	(Walking along) Las Ramblas	3	Teleferico de Montjuïc	1	Transbordador Aeri del Port	1	5	0	38.5
Sensation	Mercat de La Boqueria	3	Mercat de Santa Caterina	1	Barceloneta Beach and Many Other Beaches	2	6	1	69.2
<b>RESULTING OVERALL CBI SCORE =</b>									<b>54.4</b>



CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>BUDAPEST</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Great Synagogue (Nagy Zsinagóga)	3	St. Stephen's Basilica( Szent István Bazilika)	2	Matthias Church (Mátyás templom)	2	7	2	69.2
Mentoring	Museum of Fine Arts (Szépművészeti Múzeum)	2	Museum of Applied Arts (Iparművészeti Múzeum)	2	Museum of Ethnography (Néprajzi Múzeum)	2	6	3	69.2
Self-Fulfillment	State Opera House (Magyar Allami Operaház)	3	Parliament (Országház)	3	Heroes' Square (Hosók tere)	2	8	2	76.9
Elegance	Bridges -- Chain Bridge (Széchenyi Lánchíd), Liberty Bridge (Szabadság híd), Margaret Bridge (Margit híd)	2	Squares -- Main Square (Fo tér), Mihály Vörösmarty Square (Vörösmarty tér), Vienna Gate Square (Bécsi kapu tér), etc.	2	Gresham Palace Four Seasons Hotel	1	5	1	46.2
Originality	Fishermen's Bastion (Halászbástya)	3	Vajdahunyad Castle (Vajdahunyad vára)	1	National Theatre (Nemzeti Színház)	1	5	2	53.8
Revelation	Miksa Róth Memorial House (Róth Miksa Emlékház)	2	Imre Varga Exhibition House (Varga Imre Gyűjtemény)	2	Victor Vasarely Museum (Győző Vásárhelyi Múzeum)	1	5	1	46.2
Grandeur	Buda Castle a.k.a. Royal Palace (Királyi Palota)	2	Railway Stations -- East Station (Keleti pályaudvar) West Station (Nyugati pályaudvar)	2	Széchenyi Medicinal Bath (Széchenyi-gyógyfürdő)	2	6	1	53.8
Selfhood	Statue of Liberty (Szabadság Szobor)	2	Zsigmond Kun Folk Art Museum (Kun Zsigmond Lakásmúzeuma)	1	Váci Street (Váci utca)	1	4	1	38.5
Chronicle	Hungarian National Museum (Magyar Nemzeti Múzeum)	2	Kerepesi Cemetery (Kerepesi úti temető)	2	Aquincum (Aquincumi Múzeum)	1	5	1	46.2
Kinship	Andrássy Avenue (Andrássy út)	3	Holocaust Emlékközpont (Holocaust Memorial Center)	2	Neighborhoods -- Castle District (Várnegyed), Leopold Town (Lipótváros), Inner City (Belváros)	2	7	1	61.5
Nature	Margaret Island (Margit-sziget)	2	Botanical Garden (Füvészkert)	2	City Park (Városliget)	2	6	2	61.5
Surety	Citadel (Citadella)	1	Museum of Military History (Hadtörténeti Múzeum)	1	Hospital in the Rock (Bevezető Szerkesztése)	1	3	1	30.8
Synergy	Sziget Festival (Szigetfestival)	3	Great Circus (Nagy Cirkusz)	1	National Gallop (Budapest Nemzeti Vagta)	1	5	1	46.2
Dynamism	Children's Railway (Gyermek Vasút)	2	János Hill Chairlift (János-Hegy Libegő)	1	Castle Hill Funicular (Budavári Sikló)	1	4	1	38.5
Sensation	Public Baths -- Rudas, Király, Gellért, etc.	2	House of Terror (Terror Háza)	2	Great Market Hall (Nagycsarnok)	2	6	2	61.5

**RESULTING OVERALL CBI SCORE = 53.3**

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>BUENOS AIRES</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Basilica de Nuestra Señora del Pilar	2	Templo de la Congregación Israelita & Museo Kibrick	2	Catedral Metropolitana	1	5	4	69.2
Mentoring	Museo de Arte Latinoamericano de Buenos Aires (MALBA)	2	Museo Nacional de Bellas Artes	2	Biblioteca Nacional	1	5	4	69.2
Self-Fulfillment	Plaza de Mayo	3	Teatro Colón	3	Museo Evita	2	8	4	92.3
Elegance	Museo Nacional de Arte Decorativo	2	Puente de la Mujer	1	Galería Güemes	1	4	2	46.2
Originality	Palacio de Las Aguas Corrientes	2	La Boca/Camito	2	Floralis Genérica	1	5	2	53.8
Revelation	Museo de los Niños	2	Museo Participativo de Ciencias	2	Manzanas de las Luces	1	5	2	53.8
Grandeur	Palacio Barolo	2	Congreso	2	Círculo Militar a.k.a. Palacio Paz	2	6	2	61.5
Selfhood	Casa Nacional del Bicentenario	2	Centro Cultural de Borges & Galerías Pacífico (shopping)	2	Emerging Artists -- Braga Menendez Arte Contemporaneo, Zavaleta Lab, Hollywood in Cambodia), etc.	1	5	2	53.8
Chronicle	Cementerio de la Recoleta	3	El Museo Histórico Nacional	2	Museo Etnográfico Juan B. Ambrosetti	1	6	3	69.2
Kinship	Asociación Madres de Plaza de Mayo	3	Obelisco	2	Neighborhoods -- Palermo, Monserrat, San Telmo, Recoleta, La Boca, Barracas, etc.	1	6	1	53.8
Nature	Jardín Botánico Carlos Thays	2	Parques Tres de Febrero	2	Jardín Japonés	2	6	3	69.2
Surety	Islas Malvinas-Falkland Islands War Memorial	2	Museo de las Armas de la Nación	1	Buque Museo Fragata A.R.A. Presidente Sarmiento	1	4	1	38.5
Synergy	Tango Dancing (for example, at Café Tortoni)	3	Opera Pampa	2	Carnival (Corso de Buenos Aires)	1	6	2	61.5
Dynamism	Tranvia (Cable Cars)	1	A Line Subte	1	Guided Bicycle Tours (e.g., viator.com, urbanbiking.com)	1	3	0	23.1
Sensation	San Telmo Antiques Market (Plaza Dorrego)	2	Feria de Mataderos	2	Recoleta Fair (Feria de Plaza Francia)	1	5	1	46.2
<b>RESULTING OVERALL CBI SCORE =</b>									<b>57.4</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR CAPE TOWN									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Robben Island	3	Rhodes Memorial	3	Tuynhuis	1	7	2	46.2
Mentoring	Centre of the Book	1	Old YMCA Building	1	Tafelberg Dutch Reformed Church	1	3	2	53.8
Self-Fulfillment	Dock Clock Tower and Tide Gauge House	2	Blue Lodge (and Other Victorians on Long Street)	2	Mostert's (Wind) Mill	1	5	2	69.2
Elegance	Heart of Cape Town Museum aka Transplant Museum	2	Michaelis Collection in Old Town House	2	Irma Stern Museum	2	6	1	30.8
Originality	City Hall	2	Parliament	2	Mutual Heights Building	1	5	0	38.5
Revelation	Grand Parade	2	Guga S'Thebe Arts & Cultural Centre	2	Gold of Africa Museum	1	5	3	69.2
Grandeur	District Six Museum	2	Slave Lodge	2	South African Maritime Centre	1	5	0	38.5
Selfhood	South African Jewish Museum	2	Long Street (day and night)	2	Neighborhoods -- Castle Quarter, Adderley Street, Kalk Bay, Bo-Kaap, Simon's Town, etc.	2	6	3	61.5
Chronicle	Table Mountain	3	Boulders	3	Kirstenbosch Botanical Gardens	1	7	3	61.5
Kinship	Castle of Good Hope	2	Chavonne's Cannon Battery Museum	2	Lighthouses -- Slangkoppunt, Green Point, Robben island	1	5	1	53.8
Nature	Victoria and Alfred Waterfront	2	St. George's (Pedestrian) Mall	1	Outdoor Performances -- AGFA Amphitheatre, Kirstenbosch Summer Sunset Concerts	1	4	4	84.6
Surety	Table Mountain Cable Car	2	Chapman's Peak (Scenic) Drive	1	Hiking -- Tafelberg Road, Hoerikwaggo Trail	1	4	2	53.8
Synergy	Beaches -- Noordhoek, Clifton, Camps Bay, Llandudno Beach, etc.	3	Wineries-- Klein Constantia, Buitenverwachting, Groot Constantia, etc.	3	Outdoor Markets -- Greenmarket Square, Church Street Arcade, etc.	1	7	1	38.5
Dynamism	Robben Island	3	Rhodes Memorial	3	Tuynhuis	1	7	1	38.5
Sensation	Centre of the Book	1	Old YMCA Building	1	Tafelberg Dutch Reformed Church	1	3	1	61.5
<b>RESULTING OVERALL CBI SCORE =</b>									<b>53.3</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR FEZ									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Religious Festivals -- Moussem of Moulay Idriss, World Festival of Sacred Music, Fez Festival of Sufi Culture	3	Kairaouine Mosque	3	Zaouia of Moulay Idriss II	2	8	4	92.3
Mentoring	University of al-Karaouine (al-Qarawiyyin)	3	Dar Batha Museum	2	Many Medersas -- Mesbahiya, Attarine, Seffarine, Cherratine, etc.	2	7	0	53.8
Self-Fulfillment	Zaouia Moulay Idriss and the tomb of Moulay Idriss	2	Dar el-Makhzen (Royal Palace)	1	Other Palaces -- Palais des Idrissides, El Mokri Palace, Glaoui Palace	1	4	0	30.8
Elegance	Bou Inania Medersa	3	Attarine Medersa	2	Medersa es Sahrija	1	6	0	46.2
Originality	Chouwara Tanneries aka Terrasse des Tanneurs	3	Seffarine Square (Coppersmiths)	2	Water Clock House (Dar al-Magana)	2	7	1	61.5
Revelation	Najjarine Museum of Wooden Arts and Crafts	2	Belghazi Museum	2	Art Naji (see the entire ceramics production process)	1	5	0	38.5
Grandeur	Bab Boujloud	2	Heri el Souani (Royal Granaries)	1	Hotel Sofitel Fès Palais Jamaï	1	4	0	30.8
Selfhood	Centre Artisanale	2	Ensemble Artisanal	1	Slam&Klam Festival	1	4	2	46.2
Chronicle	Medinas -- including Fes el Bali (oldest)and Fes el Djedid (13th century)	3	Andalusian Mosque	2	Seffarine Medersa - the oldest of the Merinid medersas in Fez	2	7	4	84.6
Kinship	Neighborhoods -- Mellah (previously Jewish), Moulay Abdellah Quarter	2	Festival of Amazigh Culture	1	Kassr Annoujoum Ducci Foundation	1	4	0	30.8
Nature	Jnan Sbil (Bou Jeloud Gardens)	2	Haras Régional (Horse Farm)	1	Foret d'ain Chkef	1	4	0	30.8
Surety	Musee des Armes	2	North Borj [North Fort]	1	South Borj [South Fort]	1	4	1	38.5
Synergy	Spice, Cosmetic, Perfume, Medicine Souks -- Henna, Attarine, Ech Chabine	2	Food Souks (southern side of the medina square) and B'sara Stalls (throughout the medina)	1	Bou Jeloud Square has a funfair at holiday times, concerts and a few story tellers	1	4	0	30.8
Dynamism	Belly Dancing Performances	1	Walking Tours - Day, Night, Culinary	1	Camel Treks (Beginning in Fez and Going Outside the City)	1	3	0	23.1
Sensation	Panoramas -- Marinides Tombs Overlook, South Borj Overlook, North Borj Overlook	1	Dyers' Souk (Souk es Sebbaghin in Arabic, Rue des Tanneries in French)	1	Culinary Art Festival	1	3	0	23.1
<b>RESULTING OVERALL CBI SCORE =</b>									<b>44.1</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR HONG KONG									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Wong Tai Sin Temple	2	Man Mo Temple	2	Chi Lin Nunnery	2	6	3	69.2
Mentoring	Hong Kong Museum of Art	2	University Museum and Art Gallery at the University of Hong Kong	2	University of Hong Kong	2	6	1	53.8
Self-Fulfillment	Dr. Sun Yat Sen Museum	2	Hong Kong Cultural Centre	1	Legislative Council Building	1	4	3	53.8
Elegance	Peninsula Hotel	3	Tai Fu Tai Mansion	2	(Former) French Mission Building	1	6	1	53.8
Originality	Wisdom Path near the Tian Tan Buddha	2	Clock Tower	1	Lippo Centre	1	4	2	46.2
Revelation	Hong Kong Science Museum	2	Museum of Medical Sciences	2	Space Museum	1	5	1	46.2
Grandeur	Bank of China Tower	2	HSBC Building	1	Two International Finance Centre	1	4	2	46.2
Selfhood	<i>Shopping:</i> Nathan Road, Hollywood Road, Cat Street, etc.	3	Hong Kong Arts Centre	1	Hong Kong Planning and Infrastructure Exhibition Gallery	1	5	1	46.2
Chronicle	Hong Kong Museum of History	2	Hong Kong Heritage Museum	2	Lung Yeuk Tau Heritage and Ping Shan Heritage Trails	2	6	2	61.5
Kinship	Aberdeen Floating Village	3	<i>Neighborhoods:</i> Mongkok, SoHo, Stanley, etc.	2	Lan Kwai Fong <i>[Nightlife]</i>	1	6	1	53.8
Nature	Hong Kong Park	2	Kowloon Park	1	Victoria Park	1	4	2	46.2
Surety	Hong Kong Museum of Coastal Defence	1	Kowloon Walled City Park	1	(Former) Marine Police Headquarters	1	3	2	38.5
Synergy	<i>Festivals:</i> Chinese New Year including Lunar New Year Fireworks, Cheung Chau Bun Festival, Dragon Boat Festival	2	Ocean Park	2	Sha Tin Racecourse	1	5	1	46.2
Dynamism	Star Ferry	3	Historic Tramway	2	Tsim Sha Tsui East Waterfront Promenade	1	6	3	69.2
Sensation	Victoria Peak <i>[Views]</i>	3	Symphony of Lights	2	<i>Markets:</i> Temple Street Night Market, Ladies' Market, Flower Market and Yuen Po Street Bird Garden, etc.	2	7	1	61.5
<b>RESULTING OVERALL CBI SCORE =</b>									<b>52.8</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>ISTANBUL</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Eyüp Sultan Mosque (Eyüp Sultan Camii)	3	Ecumenical Patriarchate of Constantinople (Rum Ortodoks Patrikhanesi)	3	St. Savior in Chora (Kariye Müzesi)	2	8	3	84.6
Mentoring	Istanbul Museum of Modern Art (Istanbul Modern Sanat Müzesi)	2	Sakıp Sabancı Museum (Sakıp Sabancı Müzesi)	2	Istanbul University (Istanbul Üniversitesi)	2	6	2	61.5
Self-Fulfillment	Topaki Palace (Topkapı Sarayı)	3	Süleymaniye Mosque and Complex (Süleymaniye Camii ve Külliyesi)	3	Republic Monument (Cumhuriyet Anıtı)	1	7	2	69.2
Elegance	Blue Mosque (Sultan Ahmet Camii)	3	Rüstem Pasha Mosque (Rüstem Paşa Camii)	2	New Mosque (Yeni Cami)	2	7	3	76.9
Originality	Yerebatan Cistern (Yerebatan Sarnıcı)	3	Galata Tower (Galata Kulesi)	2	Leander's Tower aka Maiden's Tower (Kız Kulesi)	1	6	2	61.5
Revelation	Museum of the History of Islamic Science and Technology in Islam (Istanbul İslam Bilim ve Teknoloji Tarihi Müzesi)	1	Rahmi M. Koç Museum (Rahmi M. Koç Müzesi)	1	Naval Museum (Istanbul Deniz)	1	3	2	38.5
Grandeur	Hagia Sofia (Ayasofya)	3	Dolmabahçe Palace (Dolmabahçe Sarayı)	3	Crowned Prince Mosque Complex (Sehzade Külliyesi)	1	7	2	69.2
Selfhood	Museum of Turkish and Islamic Arts (Türk ve İslam Eserleri Müzesi)	2	Galata Mevlevihanesi [Whirling Dervis Lodge]	2	Istanbul Handicrafts Center (Kabasakal Medresi)	1	5	2	53.8
Chronicle	Istanbul Archeology Museums (Istanbul Arkeoloji Müzeleri)	3	Hippodrome (Sultanahmet Meydanı, At Meydanı)	3	Column of Constantine (Çemberlitaş Sütunu)	2	8	4	92.3
Kinship	Neighborhoods -- İstiklal Caddesi aka Beyoğlu, Ortaköy, Kadıköy, Üsküdar, etc.	2	Flower Passage (Çiçek Pasajı)	1	Jewish Museum of Turkey	1	4	1	38.5
Nature	Yıldız Palace and Park (Yıldız Sarayı ve Parkı)	2	Emirgan Park (Emirgan Korusu)	1	Gülhane Park (Gülhane Parkı)	1	4	3	53.8
Surety	Theodosian Walls	3	Military Museum (Askeri Müze)	2	Seven Towers Fortress (Yedikule Hisarı)	2	7	3	76.9
Synergy	Grand Bazaar	3	Spice Bazaar aka Egyptian Bazaar (Mısır Çarşısı)	3	Fish Market (Balıkpazarı)	1	7	2	69.2
Dynamism	Bosphorus Boat Ride (e.g., by Ferry)	3	İstiklal Caddesi (Historic) Tram	1	Eyüp-Piyerloti Aerial Cable Car (Eyüp-Piyerloti Teleferiği)	1	5	1	46.2
Sensation	International Tulip Festival (Istanbul Lale Festivali)	2	Waterfront Promenades (e.g., from Kabatas to Ortaköy)	1	Restaurants with Panoramic Views - 360 Istanbul, Mikla, Topaz, etc.	1	4	1	38.5
<b>RESULTING OVERALL CBI SCORE =</b>									<b>62.1</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR JAIPUR									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Birla Mandir Temple	2	Govind Devji Temple	2	Moti Doongri Ganesh Temple	1	5	4	69.2
Mentoring	Government Central (Albert Hall) Museum	2	SRC Museum of Indology	1	Shree Sanjay Sharma Museum	1	4	2	46.2
Self-Fulfillment	Chandra Mahal (Moon Palace)	2	Amber Palace (within Amber Fort)	2	Sisodia Rani Palace	1	5	3	61.5
Elegance	Hawa Mahal (Palace of the Winds)	3	Cenotaphs -- Royal Gaitor, Cenotaphs of the Maharanis	2	Akshardham Temple and Gardens	1	6	0	46.2
Originality	Jal Mahal (Water Palace)	3	10 Gates -- Tripolia Gate and the other gates in the City Palace and Jaipur Old Wall	2	Sheesh Mahal (Mirror Palace, in Amber Fort)	1	6	3	69.2
Revelation	Jantar Mantar	2	Anokhi Museum of Hand Printing	1	Alice Garg National Seashells Museum	1	4	0	30.8
Grandeur	City Palace Complex	3	Rambagh Palace	2	Ishwari Minar Swarga Sal (Minaret/Tower)	1	6	0	46.2
Selfhood	Jaipur Heritage International Festival	3	Surajkund International Crafts Mela	1	Jawahar Kala Kendra (multi arts centre)	1	5	1	46.2
Chronicle	City Palace Museums including Maharaja Sawai Man Singh Ji Museum	2	Amer Jaipur Archaeological Museum	1	Philatelic Bureau and Museum	1	4	0	30.8
Kinship	Jaipur Literature Festival	3	Neighborhoods -- Old City, Bani Park, Malviya Nagar, Vaishali Nagar, etc.	1	Jaipur Foundation Day Celebration	1	5	1	46.2
Nature	Galta (Monkey) Temples	2	Elephant Parks -- Elefantastic, Elefun, Elefantasy, Elemaison, etc.	2	Sisodia Rani Palace Garden	1	5	4	69.2
Surety	Amber Fort	3	Jaigarh Fort	2	Nahargarh Fort	2	7	2	69.2
Synergy	Gangaur Festival	2	Teej Festival	1	Elephant Festival	1	4	2	46.2
Dynamism	Elephant Rides (e.g., Viator.com up to Amber Fort) and Camel Rides	2	Kite Flying Festival on Makar Sankranti	1	Bicycle Tours	1	4	0	30.8
Sensation	Jaipur's Bazaars	2	Panoramas from Hawa Mahal, Nahargarh Fort, Ishwari Minar Swarga Sal, etc.	1	Food Tours	1	4	0	30.8

**RESULTING OVERALL CBI SCORE = 49.2**

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>JERUSALEM</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Western Wall aka Wailing Wall	3	Church of the Holy Sepulchre	3	Temple Mount	3	9	3	92.3
Mentoring	Israel Museum & Shrine of the Book	3	The Bible Lands Museum	2	Hebrew University - Givat Ram Campu	1	6	1	53.8
Self-Fulfillment	Parliament (Knesset)	3	Mt. Herzl National Memorial Park	2	The Jerusalem Theatre	1	6	1	53.8
Elegance	Dome of the Rock	3	International YMCA	2	Salameh Villa aka Belgium Consulate	1	6	1	53.8
Originality	Church of Mary Magdalene	2	Montefiore's Windmill	1	Zoharei Chama Synagogue aka Sundial Building	1	4	1	38.5
Revelation	Bloomfield Science Museum	1	Chagall Windows at Hadassah Medical Center	1	Museum on the Seam	1	3	1	30.8
Grandeur	Rockefeller Museum	1	Supreme Court Building	1	King David Hotel	1	3	1	30.8
Selfhood	L. A. Mayer Memorial Museum of Islamic Art	2	Sir Isaac and Lady Edith Wolfson Museum	1	Jerusalem Artists' House and Old Bezalel Academy of Arts and Design	1	4	2	46.2
Chronicle	Jerusalem Archaeological Park and Davidson Center	3	Tower of David Museum	1	Beit Ticho (Ticho House)	1	5	2	53.8
Kinship	Yad VaShem Memorial and Holocaust Museum	3	Old City Quarters -- Christian, Jewish, Armenian, Muslim	3	Heichal Shlomo Jewish Heritage Museum	1	7	1	61.5
Nature	Tisch Family Zoological Gardens aka Jerusalem Biblical Zoo	1	Jerusalem Botanical Gardens	1	Sacher Park	1	3	2	38.5
Surety	Jerusalem City Wall and the Gates	3	Broad Wall	1	Ammunition Hill Memorial and Museum	1	5	1	46.2
Synergy	The Israel Festival (many venues citywide)	2	Chutzot Hayotzer Festival	2	Tower of David Museum's Night Spectacular	1	5	1	46.2
Dynamism	Promenades -- Haas Promenade, Ramparts Walk	2	Egged 99 City Bus Tour (25 stops citywide)	1	Jerusalem Light Rail (diagonal NE to SW trans-city route)	1	4	0	30.8
Sensation	Panoramas -- Tower of David, Mount. of Olives	3	Machaneh Yehuda Market	2	Old City Market	1	6	2	61.5
<b>RESULTING OVERALL CBI SCORE =</b>									<b>49.2</b>



CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>KYOTO</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Myoshin-ji Temple	3	Shimogamo-jinja Shrine	3	Chion-in Temple	2	8	4	92.3
Mentoring	Kyoto National Museum (Kokuritsu Hakubutsukan)	2	Kyoto Museum of Traditional Crafts (Fureaikan)	2	National Museum of Modern Art (Kindai Bijutsukan)	1	5	2	53.8
Self-Fulfillment	Kyoto Imperial Palace (Kyoto Gosho)	3	Katsura Imperial Villa (Katsura Rikyu)	2	Shugakuin Imperial Villa (Shugaku-in Rikyū)	2	7	2	69.2
Elegance	Temple of the Golden Pavilion (Kinkaku-ji)	3	Temple of the Silver Pavilion (Ginkakuji)	3	Kodai-ji Temple	2	8	3	84.6
Originality	Torii of the Fushimi-Inari Taisha Shrine	3	Rock Gardens of Ryoanji Temple	3	Tofuku-ji Gateway/Arch	2	8	2	76.9
Revelation	Chishaku-in Temple [paintings by Tohaku Hasegawa and son Kyuzo]	2	Insho Domoto Art Museum (Domoto Insho Bijutsukan)	1	Kawai Kanjiro Memorial House (Kawai Kanjiro Kinenkan)	1	4	2	46.2
Grandeur	Kiyomizu Temple (Kiyomizu-dera)	3	Sanjusangendo Hall	2	Heian-jingū Shrine	2	7	1	61.5
Selfhood	Nishijin-ori Textile Center (Nishijin-Ori Kaiken)	2	Kyoto Handicraft Center	2	Kyoto Ceramics Center	1	5	1	46.2
Chronicle	Museum of Kyoto (Kyoto Bunka Hakubutsukan)	2	"Festival of the Ages" (Jidai Matsuri)	1	Kyoto Costume Museum (Fuzoku Hakubutsukan)	1	4	2	46.2
Kinship	Gion Neighborhood (Geisha District)	3	Higashiyama-ku Neighborhood	2	Sannen-zaka and Ninen-zaka Streets	2	7	1	61.5
Nature	Sogenchi Garden of Tenryu-ji Temple	2	Koinzan Saiho-ji Temple [a.k.a. the Moss Temple]	2	Bamboo Forest at Honen-in Temple	2	6	2	61.5
Surety	Nijō Castle (Nijō-jō)	2	East Temple (To-ji)	2	Nijo Jin-ya [350 Year Old "Safe House"]	1	5	1	46.2
Synergy	Gion Festival (Gion Matsuri)	3	Hollyhock Leaf Crest Festival (Kamigamo Jinja Matsuri)	2	Kyōto Station (Kyōto-eki)	1	6	4	76.9
Dynamism	Path of Philosophy (Tetsugaku-nomichi)	3	Boat Ride on the Hozugawa River	2	Eizan Cable Car on Mount Hiei	1	6	1	53.8
Sensation	Open Air Markets: Tenjin-sanat Kitano Shrine, Kobo-san at Toji Temple, Tezukuri-ichi at Chionji Temple, etc.	2	Gekkeikan Ōkura Museum (Gekkeikan Okura Kinenkan) [Sake Brewing]	2	Kyoto Tower [Scenic Views]	1	5	2	53.8
<b>RESULTING OVERALL CBI SCORE =</b>									<b>62.1</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR PARIS									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Cathédrale de Notre-Dame	3	Basilique du Sacré-Coeur	3	La Grande Mosquée de Paris	2	8	1	69.2
Mentoring	Louvre	3	Pompidou Centre	3	La Sorbonne	3	9	4	100.0
Self-Fulfillment	L'Arc de Triomphe	3	Hôtel des Invalides and Napoleon's Tomb	3	Opéra de la Bastille	1	7	2	69.2
Elegance	Opéra Garnier	3	Sainte-Chapelle	3	Place des Vosges	2	8	2	76.9
Originality	Catacombs	3	Grande Pyramide	2	Moulin de la Galette (windmill)	1	6	1	53.8
Revelation	Cité des Sciences et de l'Industrie	2	Bibliothèque Nationale de France	2	Musée Rodin	2	6	2	61.5
Grandeur	Eiffel Tower	3	Panthéon	3	Place de la Concorde	2	8	1	69.2
Selfhood	Bastille Day Parade/Festival	3	Champs-Élysées	3	Institut de France	1	7	4	84.6
Chronicle	Père Lachaise Cemetery & Cimetière du Montparnasse	3	Basilique de St-Denis	1	Musée Carnavalet-Histoire de Paris	1	5	2	53.8
Kinship	Districts -- Ile de la Cite and Ile St. Louis, Marais, Montmartre, Latin Quarter, etc.	3	Musée d'Art et Histoire du Judaïsme	3	Institut du Monde Arabe	1	7	1	61.5
Nature	Jardin des Tuileries	3	Jardin du Luxembourg	2	Bois de Boulogne	1	6	4	76.9
Surety	La Grande Arche de la Défense	2	Conciergerie	1	Château de Vincennes	1	4	1	38.5
Synergy	Cabarets: Moulin Rouge, Au Lapin Agile, Le Lido, Crazy Horse	3	The Festival d'Automne à Paris	1	Bistros (e.g., tightly packed for lunch)	1	5	1	46.2
Dynamism	Seine River Cruise (especially at night)	3	Canal Cruises	1	Bicycle Tours (e.g., see viator.com, bluebiketours.com)	1	5	1	46.2
Sensation	Outdoor Markets -- Rue Montorgueil, Rue Mouffetard, etc.	2	Panoramas -- From Top of Eiffel Tower, Notre Dame, Arc de Triomphe, Tour Montparnasse, etc.	2	Gourmet Stores -- Fauchon, Hediard, La Grande Epicerie au Bon Marché, La Chocolaterie Jacques Geni, etc.	2	6	1	53.8
<b>RESULTING OVERALL CBI SCORE =</b>									<b>64.1</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR RIO DE JANEIRO									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Nossa Senhora de Candelária	2	Igreja da Ordem Terceira de São Francisco da Penitencia and Convento do Santo Antônio	2	Nossa Senhor de Glória do Outeiro	1	5	1	46.2
Mentoring	Museu Nacional	2	Biblioteca Nacional	2	Espaço Cultural da Marinha	1	5	2	53.8
Self-Fulfillment	Paço Imperial	2	Palácio Tiradentes	1	Maracanã Stadium	1	4	1	38.5
Elegance	Theatro Municipal	2	Palácio Itamaraty	2	Ilha Fiscal	1	5	1	46.2
Originality	Museu de Arte Contemporânea -- Niterói	3	Escadaria Selarón	2	Catedral Metropolitana	1	6	1	53.8
Revelation	Museu Chácara do Céu	2	Sítio Roberto Burle Marx	2	Museu de Arte Moderna (MAM)	1	5	2	53.8
Grandeur	Corcovado and Cristo Redentor	3	Palácio Das Laranjeiras in Guinle Park	2	Praça XV de Novembro	2	7	1	61.5
Selfhood	Museu Internacional de Arte Naif do Brasil	2	Centro Cultural do Banco do Brasil	1	Praça Floriano aka Cinelândia,	1	4	2	46.2
Chronicle	Museu do Índio	2	Museu Histórico Nacional	2	Museu Histórico da Cidade	1	5	2	53.8
Kinship	Sambodromo	3	Neighborhoods: Lapa, Santa Teresa, Ipanema/Leblon, LGlória/Catete/Flamengo	2	Travessa do Comércio	1	6	0	46.2
Nature	Tijuca National Park	2	Quinta da Boa Vista	2	Jardim Botânico	1	5	3	61.5
Surety	Forte de Copacabana	2	Fortaleza de Santa Cruz	2	Monumento aos Pracinhos	1	5	2	53.8
Synergy	Carnival	3	Feira de Sao Cristovao aka Feira Nordestina	2	Babilônia Feira Hype	1	6	0	46.2
Dynamism	Sugarloaf Mountain (Pao de Acucar) Cable Car	3	Hang Gliding (launching from Pedra Bonita, etc.)	2	Bonde tram especially across the Arcos da Lapa	1	6	1	53.8
Sensation	Beaches: Copacabana, Ipanema, etc.	3	Panoramas: Sugarloaf Mountain (Pao de Acucar), etc.	3	Flea Markets: Feira Hippie de Ipanema, Avenida Atlântica, Feira do Rio Antigo etc.	1	7	0	53.8
<b>RESULTING OVERALL CBI SCORE =</b>									<b>51.3</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>ROME</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	St. Peters Basilica	3	San Giovanni in Laterano	3	Santa Maria Maggiore	2	8	2	76.9
Mentoring	Vatican Museums	3	Capitoline Museums	2	National Museum of Rome	1	6	4	76.9
Self-Fulfillment	Palazzo del Quirinale	2	Piazza Colonna	2	Arch of Constantine	2	6	2	61.5
Elegance	St. Peter's Square	3	Chiesa di Sant'Ivo alla Sapienza	1	Chiesa di Sant'Andrea al Quirinale	1	5	1	46.2
Originality	Trevi Fountain	3	Baths of Caracalla	2	Capuchin Cemetery	1	6	1	53.8
Revelation	Sistine Chapel	3	Galleria Borghese	3	Museo Nazionale delle Arti del XXI Secolo (MAXXI)	1	7	1	61.5
Grandeur	Colosseum	3	Pantheon	3	Piazza Navona	2	8	1	69.2
Selfhood	Via Veneto	3	Palazzo delle Esposizioni	1	Via Giulia	1	5	1	46.2
Chronicle	Roman Forum/Palatine Hill/Circus Maximus	3	Campidoglio (Capitoline Hill)	3	Basilica di San Clemente	2	8	2	76.9
Kinship	Piazza di Spagna and the Spanish Steps	3	Trastevere	2	Testaccio	1	6	2	61.5
Nature	Villa Borghese gardens	3	Villa Doria Pamphili	2	Villa Ada	1	6	3	69.2
Surety	Castel Sant'Angelo	3	Swiss Guards at the Vatican	3	Aurelian Wall	1	7	0	53.8
Synergy	Natale di Roma	1	Villa Celimontana Festivals	1	RomaEuropa	1	3	1	30.8
Dynamism	Tiber River Cruises	1	Walking Tours	1	Bicycle Tours	1	3	0	23.1
Sensation	Open Air Markets: Campo de' Fiori, etc.	1	Panoramas (views from the top of): Cupola of St. Peter's, etc.	1	Innumerable Restaurants	1	3	0	23.1
<b>RESULTING OVERALL CBI SCORE =</b>									<b>55.4</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>SAN FRANCISCO</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Mission Dolores	2	Grace Cathedral	1	Temple Emanu-El	1	4	2	46.2
Mentoring	DeYoung Museum	2	Asian Art Museum	2	Museum of Modern Art (MOMA)	2	6	2	61.5
Self-Fulfillment	San Francisco Opera, Ballet, and Symphony	2	American Conservatory Theater (ACT)	1	City Lights Book Store	1	4	2	46.2
Elegance	Civic Center, Especially City Hall	2	Conservatory of Flowers	2	Garden Court in the Sheraton Palace Hotel	2	6	3	69.2
Originality	Lombard Street	3	Transamerica Building	3	New St. Mary's Cathedral	1	7	2	69.2
Revelation	Academy of Sciences	2	Exploratorium	2	Randall Museum	1	5	1	46.2
Grandeur	Golden Gate Bridge	3	Bay Bridge	2	Palace of Fine Arts	2	7	1	61.5
Selfhood	The Castro (Gay "Coming Out" Mecca)	3	Shopping -- Union Square and Vicinity	3	Angel Island (Ellis Island West)	1	7	2	69.2
Chronicle	Presidio Including Civil War Era Housing, Cemetery...	2	Maritime National Historical Park	2	Haas-Lilienthal House	1	5	4	69.2
Kinship	Neighborhoods -- Haight-Ashbury, Castro, Mission, North Beach, Telegraph Hill	3	Chinese New Years Parade	3	LGBT Pride Parade	3	9	4	100.0
Nature	Golden Gate Park - Japanese Tea Garden, Stowe Lake, Buffalo Herd, Etc.	2	Golden Gate National Recreation Area (GGNRA)	2	SF Zoo	1	5	1	46.2
Surety	Alcatraz	3	Fleet Week and Blue Angels	2	Fort Point	2	7	2	69.2
Synergy	Chinatown	3	Red and White Fleet tour of the Bay	2	Pier 39 Sea Lions	2	7	1	61.5
Dynamism	Cable Cars	3	Historic Trolleys on Market Street and the Embarcadero	2	Hang Gliding at Fort Funston	1	6	1	53.8
Sensation	Fisherman's Wharf	3	Panoramas -- Top of the Mark, Twin Peaks, Golden Gate Bridge Toll Plaza, etc.	3	Ocean Beach	1	7	1	61.5
<b>RESULTING OVERALL CBI SCORE =</b>									<b>62.1</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR <b>ST. PETERSBURG</b>									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	St. Isaac's Cathedral (Isaakevsky Sobor)	2	Grand Choral Synagogue (Sinagoga)	2	St. Nicholas Cathedral (Nikolsky Sobor) -	1	5	2	53.8
Mentoring	State Hermitage Museum (Gosudarstvennyy Ermitazh)	3	State Russian Museum	2	Russian National Library (Rossiiskaya Natsionalnaya Biblioteka)	1	6	3	69.2
Self-Fulfillment	Tsar Palaces -- Winter, Summer, Peterof, Tsarskoye Selo, etc.	3	Performance Venues -- Mariinsky Theatre, Mikhailovsky, Alexandrinsky Theatre, Shostakovich Philharmonic, State Academic Kapella, etc.	3	Famous People's Homes -- Dostoyevsky Museum, Anna Akhmatova Museum, Nabokov Museum, National Pushkin Museum	2	8	1	69.2
Elegance	Beloselsky-Belozersky Palace	2	Stroganov Palace	2	Nicholas Palace (especially the interior)	1	5	2	53.8
Originality	Bridges -- Anichkov, Bank, Lions, Egyptian, Blue, etc.	2	Kazan Cathedral (Kazansky Sobor)	2	Church of the Savior on the Spilled Blood (Tserkov Spasitelya Na Krovi)	2	6	3	69.2
Revelation	Chamber of Art (Kunstammer)	2	Museum of Arctic and Antarctic (Muzei Arktiki i Antarktiki)	1	LabirintUm	1	4	4	61.5
Grandeur	Huge, Magnificent Squares -- Palace Square, Arts Square, Ostrovsky Square, etc.	3	General Staff Building (Glavny Shtab)	2	Smolny Cathedral and Convent (Smolny Sobor)	1	6	2	61.5
Selfhood	Victory Monuments -- Alexander Column, Monument to the Heroic Defenders of Leningrad, Narva Triumphal Arch	2	Nikolayevsky Palace/Art Center	1	Loft Project ETAGI	1	4	1	38.5
Chronicle	Alexander Nevsky Monastery and Cemetery (Lavra Aleksandra Nevskogo)	2	State Museum of the History of St. Petersburg	2	Museum of Political History in the Kchessinskaya Townhouse	1	5	4	69.2
Kinship	Neighborhoods -- Admiralty Quarter, Arts Square Quarter, Petrogradskaya Quarter, etc.	2	Ethnography Museum (Etnograficheskii Muzey)	1	Museum of the History of Religion	1	4	1	38.5
Nature	Palace Gardens -- Summer (Letny Sad), Yusupov (Yusupov Sad), Taurida (Tavrichesky Sad), St. Michael (Mikhaylovskiy Sad)	2	Three Islands -- Krestovsky (including Victory Park), Yelagin (including Kirov Park), and Kamenny Sad)	2	Zoological Museum (Zoologicheskyy Muzey)	2	6	2	61.5
Surety	Peter and Paul Fortress	2	Artillery Museum (Artilleriyskiy Muzey)	2	Naval Vessels -- Cruiser Aurora, C-189 Submarine Museum, The Memorial Complex Submarine D-2, Icebreaker Krasin	2	6	1	53.8
Synergy	Stars of the White Nights Festival	3	St.Petersburg State Circus	2	Divo Ostrov (Amusement Park)	1	6	1	53.8
Dynamism	Riverside Walks -- Palace Quay, University Quay, English Quay, Petrovskaya Quay	2	Boat Tours of the city's 93 rivers and canals	1	St. Petersburg's Tramways	1	4	1	38.5
Sensation	Panoramas -- Strelka, Church of the Savior on the Spilled Blood, "Panorama of the Neva" Ramparts Walkway, World of Water Museum	1	Eliseyev Emporium	1	Museum of Russian Vodka	1	3	1	30.8
<b>RESULTING OVERALL CBI SCORE =</b>									<b>54.9</b>

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR SYDNEY									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	St. Mary's Cathedral	2	Great Synagogue	2	Sze Yup Temple	2	6	3	69.2
Mentoring	Australian Museum	3	National Maritime Museum	2	Sydney Observatory	1	6	3	69.2
Self-Fulfillment	Sydney Olympic Park	3	Kirribilli House and Admiralty House	1	Parliament House	1	5	1	46.2
Elegance	Town Hall	1	No. 1 Martin Place	1	Anzac Bridge	1	3	1	30.8
Originality	Sydney Opera House	3	Quarantine Station	1	Vaucluse House	1	5	1	46.2
Revelation	Powerhouse Museum	2	Art Gallery of NSW	2	Biennale of Sydney	1	5	0	38.5
Grandeur	Harbour Bridge	3	Sydney Tower	2	Central Station	1	6	0	46.2
Selfhood	Speakers' Corner	1	Queen Victoria Building	2	Sydney Running Festival	1	4	2	46.2
Chronicle	The Rocks	3	Cockatoo Island	2	Museum of Sydney	1	6	4	76.9
Kinship	<i>Neighborhoods:</i> Chinatown, Elizabeth Bay, Kirribilli	1	Sydney Jewish Museum	1	Sleaze Ball	1	3	1	30.8
Nature	Royal Botanic Gardens	1	Hyde Park	1	Sydney Aquarium	2	4	4	61.5
Surety	Fort Denison	1	Middle Head	1	Anzac Memorial	2	4	2	46.2
Synergy	Darling Harbour	2	Circular Quay	2	Surry Hills Festival	1	5	1	46.2
Dynamism	Cruising Sydney Harbor	2	Metro Monorail	2	Festival of the Winds	1	5	1	46.2
Sensation	<i>Panoramas:</i> Sydney Tower Skywalk, Harbor Bridge Pylon	2	The Rocks Markets	1	<i>Beaches:</i> Tamarama, Bronte, Bondi	2	5	2	53.8
							<b>RESULTING OVERALL CBI SCORE = 50.3</b>		

CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR VANCOUVER									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Totem Poles in Stanley Park	2	Christ Church Cathedral	2	Guan Yin Temple a.k.a. International Buddhist Temple	1	5	2	53.8
Mentoring	Museum of Anthropology	3	Vancouver Public Library	2	Vancouver Maritime Museum	1	6	1	53.8
Self-Fulfillment	Olympic Cauldron, Vancouver Olympic Centre, etc.	3	City Hall	1	British Columbia Sports Hall of Fame and Museum	1	5	1	46.2
Elegance	Fairmont Hotel	2	Marine Building	1	Robson Square	1	4	1	38.5
Originality	Canada Place	3	Capilano Suspension Bridge	3	Granville Island Water Park	1	7	2	69.2
Revelation	Science World at TELUS World of Science	2	Vancouver Art Gallery	2	Dr. Sun Yat-Sen Classical Chinese Garden	2	6	2	61.5
Grandeur	One Waterfront Station	1	Lions Gate Bridge	1	Wall Centre	1	3	0	23.1
Selfhood	Bill Reid Gallery of Northwest Coast Art	2	Vancouver Fringe Festival	1	Robson Street	1	4	3	53.8
Chronicle	Gastown	2	Museum of Vancouver	2	Heritage Village a.k.a. Burnaby Village Museum	2	6	4	76.9
Kinship	<i>Neighborhoods:</i> Coal Harbor, Yaletown, Strathcona, etc.	1	<i>Festivals:</i> Vancouver Pride, Chinatown, Powell Street	1	Chinese Cultural Centre Museum and Archives	1	3	1	30.8
Nature	Stanley Park	3	UBC Botanical Garden	2	Nitobe Japanese Garden	2	7	4	84.6
Surety	Vancouver Police Museum	2	Chinese Canadian Military Museum	1	Sins of the City Walking Tour	1	4	0	30.8
Synergy	Granville Island	3	Lonsdale Quay	2	<i>Festivals:</i> Walk with the Dragon, VanDusen Garden Festival of Lights, etc.	1	6	1	53.8
Dynamism	Grouse Mountain Skyride	3	Stanley Park Miniature Railway including Halloween Ghost Train and Bright Nights Christmas Train	1	Skytrain	1	5	2	53.8
Sensation	Granville Island Public Market	3	<i>Panoramas:</i> Vancouver Lookout, Grouse Mountain Eye of the Wind, Prospect Point, Stanley Park Seawall, etc.	3	<i>Beaches:</i> Kitsilano, English Bay, Jericho, Spanish Banks, etc.	1	7	1	61.5
<b>RESULTING OVERALL CBI SCORE =</b>									<b>52.8</b>



CALCULATION OF THE CITIES BEAUTIFUL INDEX (CBI) FOR WASHINGTON, D.C.									
BEAUTIFUL FACET	THREE TOP PRINCIPLE FEATURES IN EACH CATEGORY						PRINCIPLE FEATURES SCORE	HONORABLE MENTIONS SCORE	NORMALIZED TOTAL SCORE
	Name	Score	Name	Score	Name	Score			
Epiphany	Washington National Cathedral	3	St. John's Church	2	The Islamic Center of Washington	1	6	3	69.2
Mentoring	Smithsonian Museums	3	Library of Congress	3	National Gallery of Art	2	8	3	84.6
Self-Fulfillment	White House	3	Washington Monument	3	Lincoln Memorial	3	9	3	92.3
Elegance	Jefferson Memorial	3	Dwight D. Eisenhower Executive Office Building	1	D.A.R. Memorial Continental Hall	1	5	2	53.8
Originality	International Spy Museum	3	C & O Canal	1	Newseum	1	5	2	53.8
Revelation	National Air and Space Museum	3	Bureau of Engraving & Printing	2	Marian Koshland Science Museum (National Academy of Sciences)	1	6	2	61.5
Grandeur	L'Enfant's Master Plan for Washington D.C.	3	The Capitol Building	3	The National Mall	3	9	2	84.6
Selfhood	Dumbarton Oaks	2	Hillwood Estate Museum & Gardens	1	Tudor Place	1	4	2	46.2
Chronicle	National Archives	2	National Portrait Gallery	2	Ford's Theater	2	6	3	69.2
Kinship	War Memorials -- Vietnam Veterans, National World War II, Korean War Veterans (etc.)	3	U.S. Holocaust Memorial Museum	2	Neighborhoods - Georgetown, Dupont Circle, Foggy Bottom, Glover Park, Penn Quarter, Capitol Hill (etc.)	2	7	0	53.8
Nature	National Zoological Park	2	The Tidal Basin	2	Theodore Roosevelt Island	1	5	3	61.5
Surety	The Pentagon	3	The Supreme Court	3	Federal Bureau of Investigation Headquarters	2	7	2	76.9
Synergy	Independence Day Celebration	3	National Cherry Blossom Festival	3	Smithsonian's Folklife Festival	1	7	1	61.5
Dynamism	Potomac River Cruises	1	Old Town Trolleys	1	Bicycle and Sedway Tours	1	3	1	30.8
Sensation	Panoramic views -- from Washington Monument, Lincoln Memorial, Capitol Building, Old Post Office (etc.)	3	Farmers Markets (40 in D.C.) -- Dupont Circle, USDA on Independence Avenue, Eastern Market (Etc.)	1	Music Festivals - D.C. Jazz Festival, Summer Music Festival at the National Cathedral (etc.)	1	5	0	38.5
<b>RESULTING OVERALL CBI SCORE =</b>									<b>62.6</b>