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#### Citation

JOSHI, Devin K..(2021). The way of longevity: Blue zones as unselfconscious models of Daoist living. *Journal of Daoist Studies*, 14, 128-151.

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Published in Journal of Daoist Studies, 2021, 14, 128-151.

DOI: 10.1353/dao.2021.0004

# The Way of Longevity

## Blue Zones as Unselfconscious Models of Daoist Living

Devin K. Joshi

### Abstract

Demographic researchers have identified five geographic regions around the world with unusually high proportions of nonagenarians and centenarians. Studies of these longevity hotspots or “blue zones” are now trying to distill lessons for how people everywhere can live long and active lives with minimal impediments. In this study, I compare lifestyle observations and longevity prescriptions derived from studies of blue zone centenarians with long-standing recommendations for the practice of nourishing life (*yangsheng*) to achieve a long and healthy life in the Daoist tradition. Observing a high degree of similarity across the four lifestyle domains of diet, exercise, mindset, and relationships, I find blue zone recommendations for successful aging closely resemble and seemingly validate many longstanding Daoist prescriptions for advancing human health and longevity. I conclude that although blue zone residents may not be consciously Daoist, they seem to represent unselfconscious models of Daoist living.

In recent years, researchers have endeavored to identify geographic regions around the world with unusually high proportions of nonagenarians and centenarians in order to distill general lessons for how people everywhere can live long and active lives with minimal impediments. Thus far, studies of these longevity hot spots or “blue zones” have concluded that certain community norms and practices may contribute up to a decade of prolonged healthy living. Not surprisingly, these claims have attracted much

attention among scholars and the general public.<sup>1</sup> To Daoists, however, such ideas are far from novel. With over two thousand years of wisdom gained in the search for immortality, Daoism has functioned almost like an applied science of longevity in China (and beyond), having acquired much knowledge from mystical insights, sacred scriptures, shared reflections, and experimental processes of trial and error.<sup>2</sup> As the Daoist tradition has already invested much time and effort into identifying social and lifestyle determinants of longevity, this article compares Daoist practices of “nourishing life” (*yangsheng* 养生) with longevity prescriptions derived from studies of blue zone centenarians.<sup>3</sup> For, if the two are similar, it would suggest that Daoists may have been right all along.

## Blue Zones as Longevity Hotspots

In demographic research, the term “blue zone” denotes “a rather limited and homogeneous geographical area where the population shares the same lifestyle and environment and its longevity has been proved to be exceptionally high” as measured by ratios of healthy nonagenarians and centenarians to the overall population (Poulain, Herm and Pes 2013, 89). Thus far, the following five blue zones have been identified across four continents, as based on the work of Dan Buettner (2012; also Buettner and Skemp 2016).

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<sup>1</sup> See, for example, Appel 2008; Buettner 2012; Poulain, Herm, and Pes 2013; Carter 2015; Buettner and Skemp 2016; Hitchcott, Fastame, and Penna 2018.

<sup>2</sup> See Ai 2006; Davis 2018; Engelhardt 2000; Kohn 2009; 2012; Wong 1997; Zhao 2016.

<sup>3</sup> Livia Kohn (2012, 1-2) distinguishes between “longevity (healthy old age) and prolongevity (radical life extension) that may lead eventually to immortality (freedom from death).” As she points out, efforts to achieve both “work in two main thrusts: personal lifestyle modifications and advanced medical research. The former...works mainly with diet (especially calorie restriction), supplements (vitamins, growth hormones), exercise (aerobics, weight training, stretches), and stress reduction (relaxation, meditation).”

**Ogliastra, Sardinia (Italy).** The first blue zone is in a remote, mountainous part of the island of Sardinia in the Mediterranean Sea where people often have to work long hours and walk long distances to “eke out a living from a rugged land by raising sheep and goats” (Buettner 2012, 39). Having long experienced economic isolation, this region retains many “traditional social values, such as the respect for elders as a source of experience, the importance of the family clan, and the presence of unwritten laws” (2012, 35). Unlike the rest of Italy, this region has experienced exceptional longevity with one out of every 200 people born between 1880 and 1900 becoming centenarians (Franceschi and Bonafe 2003, 457). In addition, both men and women are equal in number, unlike in most industrialized countries where women significantly outnumber men when it comes to reaching old age.

**Nicoya Peninsula, Costa Rica.** This historically isolated region in the northwest of Costa Rica features a group of villages exhibiting exceptional longevity. Though not materially wealthy, residents are family-oriented, work on the land, soak up much sun, and eat nothing packaged or processed. As one local centenarian acknowledged, “he loved to work, mostly because the fruits of his labor have provided for his family. For most of his career, he worked as a mule driver, hauling logs out of the forested hills and acting as a courier across the largely road-less Nicoya Peninsula. He also grew corn, beans, and vegetables to feed his wife and six children” (Buettner 2012, 188). Consuming a mostly vegetarian diet, the elderly inhabitants here, many of whom descend from the Chorotega Indians, are characterized by a strong work ethic and “zeal for family” (2012, 180), also having “apparently lived low-stress lives” (2012, 192).

**Okinawa, Japan.** The islands of Okinawa, a formerly independent kingdom now part of Japan, have unusually high life expectancy, especially for women. Okinawa experienced heavy destruction during World War II and scarce food resources before the war, yet despite these hardships, as Dan Buettner argues, older Okinawans were almost “born into a lifestyle that promotes health. They have been blessed by access to year-round fresh, organic vegetables, strong social support, and these amazing herbs that amount to preventive medicines” (2012, 95). Busy working, gardening, engaging in social activities, and maintaining their households into their late years, Okinawans belong to close knit social groups called *moai* 模合 with whom they meet regularly throughout their lives for mutual support.

**Ikaria, Greece.** Like Okinawa, Ikaria is a fairly remote island that suffered greatly during World War II. Its landscape is rocky and mountainous but, perhaps due to remarkably fresh air, water, and a low-stress lifestyle, this longevity hotspot features “as many healthy males over 90 as females that age” (Buettner 2012, 240). Located in the Aegean Sea, the food here is fresh and local—a variation of the Mediterranean diet—and people frequently visit their neighbors to share conversations and wine. Featuring “exceedingly low rates of dementia” (2012, 244), residents share a sense that life is more important than money and that people should support each other.

**Loma Linda, California.** This community of Seventh-day Adventists in Southern California features life expectancy ten years higher than the US national average. As in other blue zones, religious beliefs play an important role in people’s lives. Early morning prayers, regular exercise, and a day off each week from work and technology—the Sabbath—for long hikes with family and friends reinforces people’s social connections and relationship with nature. Adventists consume a mostly Biblical diet prioritizing nuts, legumes, fruits, vegetables, and salads while generally avoiding processed foods, meat, alcohol, smoking, and caffeinated beverages.

Aside from these five longevity hotspots, there are now efforts to bring blue zone lifestyles to other parts of the world including cities and towns in the U.S. and Canada.<sup>4</sup> The first U.S. blue zones “demonstration community” began in Albert Lea, Minnesota in 2009. The so-called Blue Zones Project, moreover, in its promotion of longevity efforts has worked together with various municipalities in the country, seeking “to transform ordinary American towns into extraordinary places where people live long, healthy lives” (Carter 2015, 376). Some optimists even believe that with appropriate lifestyle modifications, especially in diet and nutrition, “blue zones, now limited to just a few populations in the world, can become commonplace” (Appel 2008, 215).

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<sup>4</sup> The Blue Zones Project has worked with at least 27 cities across the USA (Buttner and Skemp 2016, 321). See <https://communities.bluezonesproject.com>.

## Daoist Longevity

There may be a correspondence between blue zone lifestyles and the Daoist longevity tradition, which strongly emphasizes the cultivation of physical health to achieve a long and healthy life. As Yanxia Zhao states,

At the heart of Daoism is the strong focus on happy and healthy longevity. . . The aim of the Daoist religion is to encourage its practitioners to attain the Dao, and to achieve oneness with this great source of all living things, and thus become an immortal or a true being. In this way, Daoism affirms the capability of humans to become a transcendent being by their own personal effort. (2015, 131)

Livia Kohn notes that, while the Chinese traditionally believed that human life has a “predetermined duration of 120 years . . . Daoists have always claimed that there are not only ways to reach this life expectancy on a regular basis but to extend it to far longer periods” (2009, 85). Stressing human agency, Daoists contend that “my life is in my hands, not in the hands of Heaven” (Wang and Yan 2017, 154).<sup>5</sup> They hold that, to a large extent, whether one lives “with a strong physical body or a weak one, with a short lifespan or a long one, is entirely dependent on oneself” (Zhao 2015, 132).

As championed by classical Daoist texts, including the *Zhuangzi* 庄子, *Liezi* 列子, and *Taiping jing* 太平经 (Scripture of Great Peace), Daoists have long prioritized the ideal of nourishing and nurturing life as well as related aims of “nourishing inner nature” (*yangxing* 养行), reaching “longevity” (*shou* 寿), and “living long” (*changsheng* 长生) (Kohn 2012, 3).<sup>6</sup> Many Daoists also believe the human body is “a microcosm with the physical features of the world or universe as macrocosm,” serving as “a sort of ‘vessel’ or ‘residence’ of the Dao” (Engelhardt 2000, 95-96). To them, the body serves as a reservoir

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<sup>5</sup> This popular Daoist saying hails from Ge Hong’s 葛洪 *Baopuzi* 抱朴子.

<sup>6</sup> Other formative Daoist texts emphasizing *yangsheng* include the *Yangsheng fang* 养生方 (Recipes for Nourishing Life), *Yangsheng lun* 养生论 (On Nourishing Life), *Yangsheng yaoji* 养生要集 (Compendium of Nourishing Life Essentials), *Baopuzi yangsheng lun* 抱朴子养生论 (Baopuzi on Nourishing Life), and *Yangxing yanming lu* 养性延命录 (Record on Nourishing Inner Nature and Extending Life). See Engelhardt 2000; Kohn 2012; Zhao 2016).

of “a vital energy known as *qi* (气), which can be described as a bioenergetic potency that causes things to live, grow, develop, and decline” (Kohn 2012, 4). Human life is the accumulation of *qi*, while death is its dispersal.

People constantly draw *qi* into the body from air and food as well as from other people through sexual, emotional, and social interaction. But they also lose *qi* through breathing bad air, living in polluted conditions, overburdening or diminishing their bodies with food and drink, getting involved in negative emotions, engaging in excessive sexual or social interactions, and in general suffering from various forms of stress. (2012, 4)

Managing one’s *qi*, therefore, is essential to longevity and traditional “practice focuses relentlessly on the internal *qi* of the body; longevity is the reward for maintaining *qi* harmoniously in its circulation” (Michael 2015, 158).<sup>7</sup>

In the Daoist tradition, practices of nourishing life advance across three levels from healing illnesses through extending longevity to achieving immortality.<sup>8</sup> The most advanced stage of immortality is an objective of Daoist “internal alchemy” (*neidan* 内丹) and involves intensely ascetic practices. In contrast, beginning and intermediate “selfhealing and self-health-care exercises” for those whose aim is to extend life by a decade or two can be “practiced by ordinary people in their daily lives and activities” (Zhao 2015, 132). Thus, Daoist cultivation is more akin to the traditional Chinese concept of “preserving health” (*baojian* 保健) by preventing diseases from occurring in the first place than the more modern and Western-influenced idea of “medical treatment” (*yiliao* 医疗), applied after one has already been afflicted.

Daoist conceptualizations of nourishing life have transformed over time. The earliest methods, recorded in the Han dynasty and before, worked primarily with breathing, bodily exercises, and alchemical experiments (see Michael 2015). Later they evolved to include techniques that involve both

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<sup>7</sup> Harmony, both within the body and in society, has long been championed by various movements in China including the Chinese government’s campaign over the past decade to build a “socialist harmonious society” (Joshi 2012).

<sup>8</sup> Engelhardt 2000, 80; Kohn 2012, 9; Zhao 2015, 132; 2016, 202.

body and mind.<sup>9</sup> In addition, the ideal of nourishing life with its longstanding Daoist connotations increasingly became common in popular discourse, so that today it is frequently used in the promotion of goods and services designed to alleviate various forms of “diminished health” (*yajiankang* 亚健康) (Bloch 2019, 171).<sup>10</sup> More specifically, longevity relevant to daily living and improved health relates to four lifestyle domains: diet, exercise, mindset, and relationships.

## Diet and Exercise

While Daoist lore is full of “recipes for ingesting herbs and minerals for immortality” (Wong 1997, 38), entry-level dietetics heavily emphasize eating food that is natural, not preserved, freshly cooked, and in season (Kohn 2012, 177; see also Arthur 2009; 2013; Kohn 2010).<sup>11</sup> Consuming healthy foods that are grown locally is encouraged and diets should be primarily plant-based with minimal fat and meat (Wong 1997, 228).<sup>12</sup> Although total conversion to vegetarianism is not required, one should eat lightly and in small portions, remembering to “always leave a bit of room in the stomach, eating lightly especially at night, and to balance the intake of food with movement—ideally a walk of a mile or so after a meal—so that digestion can work properly” (Kohn 2012, 177).

As for other ingestible substances, Daoists do not prohibit medicinal supplements or liquor, but these should be consumed in moderation as food,

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<sup>9</sup> See Engelhart 2000; Zhao 2014; 2015; 2016. By the Song dynasty (960-1279), Daoists had abandoned their earlier experiments with “external alchemy” (*waidan* 外丹) in favor of the more internal “dual cultivation of body and mind” (Wong 1997, 79).

<sup>10</sup> As Dear notes, “the two-character phrase [*yangsheng* 养生] embellishes the advertising and merchandising of everything from jars of honey to saunas and spas, country villa sales or indeed tourism promotion for cities and whole provinces” (2012, 12).

<sup>11</sup> Foods believed to have special healing properties that were traditionally chopped and mixed into immortality pills include asparagus root, atractylis, China root fungus, Chinese lyceum (*gouji*), jade bamboo, malva, pine tree, sesame, and Solomon’s Seal (Kohn 2012, 121).

<sup>12</sup> The main reason for meat avoidance is negative impacts on the body’s health (Kohn 2010, 83).



herbs, and minerals are preferable to drugs for strengthening and healing the body (Engelhardt 2000, 93).<sup>13</sup> In this way, eating healthy foods is seen as a means of “food as medical treatment” (*shiliao* 食疗) to prevent onset of disease and ill health (Dear 2012, 20). Daoists also like to “absorb fresh *qi*” (*fuqi* 服气) from sources such as clean air, dew, and mist, and to absorb the “essence of the sun and moon” (Wong 1997, 44). Those seeking to reach more advanced stages of immortality cultivation will eventually seek to

wean themselves from solid food, replacing it with raw vegetables, fruits, and nuts. . . They then increase herbal supplements, liquid nourishment, and internal guiding of *qi*. . . to the point where they no longer need food but live entirely on *qi*. This process, called ‘abstention from grain’ [*bigu* 辟穀], lightens the body’s structure in favor of subtler energies and cosmic awareness.<sup>14</sup> (Kohn 2009, 87)

Such austere measures, however, are not expected of ordinary people who eat grain-based meals and are more focused on yin-yang balance (Kohn 2010, 74).<sup>15</sup> In addition to longer life, expected benefits of Daoist dietetics include “clear eyesight, acute hearing, strong bones and muscles, supple flesh, black hair, being light, being invigorated, and having all of one’s teeth. . . [basically] overcoming the manifestations of an aging body” (Arthur 2009, 45).<sup>16</sup>

Aside from dietary measures, Daoist longevity techniques include calisthenics to enhance flexibility, increase strength, make the body lighter, and promote smooth *qi*-flow.<sup>17</sup> An important feature of classical practice is “*qi*-circulation, specified as ‘spitting out the old and taking the new [*qi*]’ (*tugu naxin* 吐古纳新) plus healing exercises or *daoyin* 导引 (lit., guide and pull) bends and stretches modeled on animals, such as the typical ‘bear-hangings

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<sup>13</sup> To avoid strong tastes and flavors, *yangsheng* dishes “are lightly cooked and mild in flavor; . . . the principle is to avoid overstimulation” (Dear 2012, 19).

<sup>14</sup> Daoist monastics consume a more restrictive diet (Kohn 2010, 77-79).

<sup>15</sup> Yin foods tend to grow in dark spaces whereas yang foods grow in the light (Kohn 2012, 117).

<sup>16</sup> After consuming the right foods, Daoist scriptures also tell of a wide range of extraordinary magical abilities adepts can supposedly attain (Arthur 2009, 49).

<sup>17</sup> The *Daoyin jing* 导引经 is an early source of healing exercises (Kohn 2012, 98).

and bird-stretches' (*xiongjing niaoshen* 熊泾鸟申)" (Michael 2015, 146).<sup>18</sup> The latter also include the "five animals frolic" (*wuqin xi* 五禽戏) and other animal-based postures.<sup>19</sup> Many of these "qi exercises and postures," nowadays summarily called qigong 气功, can be "incorporated into the daily activities of sitting, standing, walking and laying down. Thus, cultivating the body can occur in every facet of life" (Wong 1997, 218; Engelhardt 2000, 83).<sup>20</sup>

Another energy practice used for long life is taiji quan 太极拳, an internal martial art utilizing "low-impact, slow-motion exercise" accessible to all, including "the sickest and most elderly, even those confined to wheelchairs or recovering from surgery" (Zhao 2016, 205).<sup>21</sup> Other forms include the "eight brocades" (*baduanjin* 八段锦) and "diamond longevity practice" (*jingang changshougong* 金刚长寿功), which help qi flow through the body's meridians (2016, 205). Beyond this, there are also various kinds of massage, kneading, and specific forms of sexual practice, known as the "bedchamber arts" (*fangzhong shu* 房中术).

Daoists encourage the practice of both "external strengthening" (*waizhuang* 外壮) and "internal strengthening" (*neizhuang* 内壮). The former maintains healthy muscles, ligaments, tendons, and blood circulation with techniques such as tendon-stretching and marrow-washing, while the latter

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<sup>18</sup> Animal postures are good to emulate because "animals are beings of the natural world that have not sacrificed their inner natures to the dictates of socialization. Their systems of bodily circulation are open, whereas efforts toward the external world to gain power, wealth, or fame draw a human's attention away from the body and create blockages in the rhythmic, internal systems of circulation, leading to early death" (Michael 2015, 146).

<sup>19</sup> The "five animals" are tiger, deer, bear, monkey, and crane. By contrast, "the *Daoyin jing* presents various practices associated with...mostly water-based creatures, such as toad, turtle, and dragon" (Kohn 2012, 97).

<sup>20</sup> Popular with many older Chinese people, "the energy exercise qigong, which is heavily influenced by Daoism" can benefit one's "blood sugar levels, insulin levels, microcirculation, and disease resistance" (Ai 2006, 157-58).

<sup>21</sup> Other internal martial arts to "stretch the tendons, articulate the joints, soften the muscles, and improve general circulation" include "eight trigrams palm" (*baguazhang* 八卦掌), "form and intention fist" (*xingyi quan* 形意拳) and the "six harmonies and eight methods" (*liuhe bafa* 六合八法) (Wong 1997, 225).

works on the “internal structure and functions of the physical body. . . massaging the internal organs, enhancing the circulation of blood, and stimulating the nervous system” (Wong 1997, 178).<sup>22</sup> For the most part, “Daoist exercises consist of slow movements and careful stretches, combined with deep breathing and conscious awareness. Releasing stress, alleviating heaviness, aiding digestion, and improving circulation, they open the energy channels, balance yin and yang, and activate a subtler dimension of being” (Kohn 2009, 88).

## Mind and Society

Traditionally Daoists view the body and “heart and mind” (*xin* 心) as fully integrated and inseparable. To enhance health, they accordingly highly emphasize meditation and breath regulation and control.<sup>23</sup> For example, Eva Wong discusses a dozen different types of Daoist meditations including various forms of visualization, concentration, and observation (1997; Kohn 2009, 88). The aim of these different methods is to reach “a state where the mind has been freed from desires and is completely absorbed in Dao” (Kohn 2012, 264). Related techniques include “standing and moving *qigong* (subtle breath skills), *neigong* (inner mind skills)” as well as the “inner smile and sitting in oblivion,” all of which aim to reduce or eliminate chronic stress and increase “overall wellbeing” (Zhao 2016, 205).

To maintain a healthy mind-set, Daoists have long “advocated living a simple lifestyle with minimal desire, believing that too much excitement and satisfaction of the senses could harm body and mind” (Wong 1997, 28; see also Kohn 2009, 87; 2012, 78; Bloch 2019, 165). Insisting on “the importance of stilling the mind and dissolving desire,” Daoists generally believe “the ultimate reality of Dao can be experienced only by the original mind, which is empty of thoughts, attachments, and desire” (Wong 1997, 71, 83). Hence,

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<sup>22</sup> “Needless to say, these movements require precise execution, or injuries can occur” (Wong 1997, 213).

<sup>23</sup> Regulating breath is without conscious control whereas directing the breath means working with conscious control. Methods include nostril breathing, mouth and nostril breathing, mouth breathing, natural abdominal breathing, reverse abdominal breathing, perineal breathing, tortoise breathing, fetal breathing, and breathing with the entire body (Wong 1997, 214-61).

early Daoist philosophers like Zhuangzi who famously “regarded social conventions as the greatest enemy of personal freedom and integrity,” avoided occupations mired by greed and hypocrisy (1997, 26). The key point is that “people should avoid stress” (Kohn 2009, 87; see also Santee 2008).

Although Daoism is an “individual-focused tradition” (Zhao 2015, 125) that historically opposed socially imposed rules incompatible with a being’s inherent nature (Kohn 2009, 92), it also stresses “harmonious relationships among individuals” and “between individual and society” (Zhao 2015, 125). As Eva Wong notes, resembling the shamans of ancient times, the original notion of a “Daoist sage was a very involved member of the community. . . far from doing nothing, the Daoist sage of the *Daode jing* is an active member of society and fit to be a king” (1997, 24-25).

The role of community varies in different branches of Daoism, with some placing considerable emphasis on “accumulating merit by doing charitable works” due to the belief that “good deeds bring reward and unethical deeds invite retribution” (Wong 1997, 6). An important text from the Song dynasty laying out moral admonitions is the *Ganying pian* 感应篇 (Treatise on Impulse and Response). It states

If you are in harmony with the Dao you will advance. . . Be kind and compassionate to all things. Be dedicated in whatever you do. . . Help orphans and widows. Respect the old and care for your young. Do not hurt trees, grass, and insects. Share in the suffering of others. Delight in the joys of others. Help people in desperate need. Save people from harm. View the good fortune of others as your good fortune. View the losses of others as your own loss. (ch. 4; Wong 1997, 191)

Supporting people in need, volunteering without taking credit, and being loving to all creatures under heaven are also implied by Laozi’s “three treasures” of “kindness” (*ci* 慈), “simplicity” (*jian* 俭), and “not daring to be ahead of the world” (*bukan wei tianxia xian* 不敢为天下先) (Zhao 2015, 128). Daoism encourages each individual to “establish a harmonious relationship with her/his natural and social environment and also with the other species on earth and in the universe” (2015, 126; see also Miller 2017). Lastly, on a more intimate level, Daoists encourage people to have healthy sexual relations to enhance their well-being and produce healthy children (e.g., Ai

2006; Dear 2012). Especially important is hedonic balance and *qi* maintenance, that is, to enjoy sexual excitement but to not over exhaust one's energy supply (Kohn 2009).<sup>24</sup>

## Comparison

Comparing Daoist longevity prescriptions with those derived from studies of blue zone centenarians, Dan Buettner's "power nine" recommendations are most relevant. He developed them based on his interviews in the five longevity hotspots and describes them as "a cross-cultural distillation of the best practices of health, a de facto formula for longevity" (2012, 5). Related to Daoist practices, they are:

Dimension	Blue Zones—'The Power Nine' Recommendations
A. Diet	1) 'Hara Hachi Bu' — cut calories by 20 percent. 2) 'Plant Slant' — avoid meat and processed foods. 3) 'Grapes of Life' — drink red wine (in moderation).
B. Exercise	4) 'Move Naturally' — balance, walking, regular low-intensity physical activity, be active.
C. Mind-set	5) 'Purpose Now' — take time to see the big picture. 6) 'Downshift' — take time to relieve stress. 7) 'Belong' — participate in a spiritual community.
D. Relationships	8) 'Loved Ones First' — make family a priority. 9) 'Right Tribe' — be surrounded by those who share blue zone values.

More specifically, the "power nine" include three dietary recommendations: cut calorie intake by 20 percent, eat plant-based foods

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<sup>24</sup> As Eva Wong explains, "generative energy [*jing* 精] is produced in sexual arousal... Thus, to conserve generative energy, one must be sexually aroused but not emit the procreative substance" (1997, 185). In order to achieve this, one must "engage in sexual techniques whose aim is to revert the flow of the *jing* from down and out to up and in, thus using it to 'nourish the brain' (*huanjing bunao* 还精捕脑)" (Engelhardt 2000, 99).

while avoiding meat and processed foods, and drink red wine in moderation (one or two glasses per day). These recommendations largely parallel those of Daoism. The first, caloric restriction, is a type of fasting that cuts down the amount of calories consumed compared to a normal diet and helps to maintain a healthy body weight (Buettner 2012, 259). For instance, Okinawans try at every meal to stop eating when their stomach is eighty percent full by uttering the phrase “*hara hachi bu*” 腹八分, before each meal to remind themselves of this objective.<sup>25</sup> Similarly, Ikarians practice occasional fasting while Nicoyans and Loma Lindans eat light dinners. Daoist dietetics likewise involve calorie restriction by emphasizing light eating and engaging in the practice of leaving the stomach up to one third empty when eating meals (Kohn 2010, 76).

The blue zone recommendation to eat a diet strong in fresh vegetables, fruits, legumes, and nuts so as to provide the body with sufficient vitamins and nutrients also resembles early stage Daoist dietary practices which favor vegetarian, fresh, non-processed and locally grown foods. In both traditions, meat is eaten infrequently (ranging from once or twice a week to once a month or never) and, as in typical Chinese diets, the meat most commonly eaten in (four out of five) blue zones was pork. In each specific blue zone, local foods, herbs, and minerals often obtained from home gardening, local foraging, beekeeping, fishing, and animal husbandry were associated with longevity. Just as Daoists focus on the importance of herbs and minerals for longevity, Ikarians enjoy wild medicinal teas; Okinawan centenarians eat a diet rich in herbs, calcium, vitamins, and iron; and Nicoyans drink hard water rich in calcium and magnesium. Further resembling Daoist attention to building strong bones through practices like marrow-washing, blue zone residents consume items rich in calcium, such as goat’s milk and cheese in Sardinia and nuts in Loma Linda.

Likewise, growing, raising, and collecting one’s own food is emphasized in the Chinese tradition and venerated in classical Daoist texts. In the same

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<sup>25</sup> Consciousness also contributes to dietetics in both Okinawan and Daoist contexts. As Shawn Arthur’s study of classical Daoist practices reveals, a meal’s health effects are strongest when adepts are “aware of the medicinal and *qi*-based properties of the ingredients they are ingesting . . . this requires adepts to be cognizant of their own energetic needs when choosing an appropriate diet” (2009, 35)

way that Ikarians eat wild greens growing around their island, Daoists have traditionally foraged for immortality aids among herbs, minerals, and metals in the wild. The following table highlights specific local foods considered to be health promoting in the blue zones (based on Buettner 2012).

Blue Zone	Health Promoting Local Foods by Region
Sardinia (Italy)	Goat's milk, whole wheat, red wine from Cannonau grapes, garden vegetables, mastic oil, and beans.
Okinawa (Japan)	Sweet potatoes, tofu and fermented soy products, green tea, bitter melon ( <i>goya</i> ), daikon radish, mugwort, turmeric, miso, soup, herbs, and garden vegetables.

Loma Linda (USA)	Nuts, whole grains, tomatoes, legumes like peas and beans, and drinking lots of water every day.
Nicoya (Costa Rica)	Fresh tropical fruit from one's own yard (e.g. papaya, mango, chico zapote, oranges), corn infused with lime, beans, squash, garden vegetables, high-antioxidant vitamin-rich foods (e.g. manon, anona, wild ginger), and mineral rich (in calcium and magnesium) hard water.
Ikaria (Greece)	Dark honey, herbal teas, local yogurt, olive oil, potatoes, goat's milk, beans, wild greens (such as fennel, dandelion and horta), homemade bread, locally caught fish consumed about twice a week, and drinking two to four glasses of red wine per day.

Other blue zone recommendations include drinking wine and lots of water plus absorbing sunshine. Whereas liquor was absent from Nicoyan and Adventist diets, wine from grapes or rice (Japanese *sake*) is regularly consumed in Sardinia, Ikaria, and Okinawa. Thus, imbibing alcohol does not seem to be necessary for longevity, but having the right kind of drink in the right context may beneficially release stress. This is compatible with the Daoist preference for moderation in ingesting strong substances like

alcohol.<sup>26</sup> An equivalent to drinking lots of water is the Daoist tendency to consume tea—a practice motivated by the fact that water generally needs to be boiled in order to be potable in China and adding tea leaves enhances its taste (Kohn 2010, 90).

Lastly, sun exposure which allows the body to soak up Vitamin D is characteristic among centenarians in blue zones, especially in subtropical Okinawa and tropical Nicoya. This is something traditional Daoists likewise enjoy as they spend time meditating on mountain tops and engaging in organic gardening (Blofeld 1978). Moreover, since the Daoist creed holds that absorbing the sun's energies is good for one's *qi*, some Daoist practitioners deliberately expose themselves to direct sunlight— though preferably at sunrise or sundown when the light is least blinding (Wong 1997).

## Training Body and Mind

Another blue zone recommendation is to “move naturally” on a regular basis and to maintain a healthy body mass index (BMI) by engaging in cardiovascular activities to absorb oxygen and raise the heart rate, antigravity practices like walking and standing, balancing through activities like yoga and taiji quan, and strength training to build and maintain muscle mass (Buettner 2012, 16-18). Likewise, strength, flexibility, and balance exercises are emphasized in Daoist methods of nourishing life, and certain qigong forms demanding slow movements and careful stretches resemble body movements that commonly occur in blue zone activities such as gardening in Nicoya and Okinawa and shepherding in Sardinia.<sup>27</sup>

In the blue zones, elders typically “engage in regular low-intensity physical activity, often as part of a daily work routine” (2012, 267). Examples

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<sup>26</sup> While advanced Daoist practitioners often forgo alcohol consumption, “‘nourishing life liquors’ (*yangshengjiu* 养生酒) are long established in longevity and Daoist practice” (Bloch 2019, 176).

<sup>27</sup> Okinawan centenarians exhibiting good body strength and balance appear to have regularly gardened, collected firewood, sat on the floor, and engaged in kneeling and squatting – for instance, using squat toilets. Similarly, lifestyle practices involving physical activity such as home and landscape maintenance, cooking, or working as a nurse and giving massages were credited with contributing to longevity in Loma Linda (Buettner 2012, 147-151).



include the unselfconscious workout one naturally gets from working in the garden, tending sheep, repairing the house, or walking to the market. Other blue zone recommendations, like always taking the stairs, walking or bicycling instead of driving, raking or sweeping with a broom instead of using automated cleaning devices, also resemble Daoist preferences for more nature-conforming tools and methods over the use of technologies that are highly divorced from nature or which require extensive imported fuels and which generate waste, noise, and pollution. Walking is also ubiquitous in the blue zones and appeared to be “the one activity that all successful centenarians did—and do—almost daily” (Buettner 2012, 269). Regularly walking long distances “has a positive effect on muscle and bones—without the joint-pounding damage caused by running marathons or triathlons” (2012, 60). In Daoism, walking is also a preferred means to get to places. Aside from the long walks and hikes Daoists have historically taken in remote mountains to find natural ingredients for their alchemy, Laozi reminds us that even “a thousand-mile journey begins with a simple step” (ch. 64).

Another, more mind-focused takeaway from the blue zones is that one should live with a sense of purpose, take time to see the big picture, relieve stress, downshift, and participate in a spiritual community. These points are likewise emphasized in Daoism. As for having a purpose in life, Dan Buettner explains that “Okinawans call it *ikigai* [in Japanese: 生きがい], and Nicoyans call it *plan de vida*, but in both cultures the phrase essentially translates to ‘why I wake up in the morning’” (2012, 281). Daoists are likewise well-attuned to the bigger picture concerning their own position within the cosmos. They have a crystal-clear purpose in life: to follow, return to, merge with, and become one with Dao.

Daoists also typically participate in a spiritual community whether they are monastics who “leave the family (*chujia* 出家), lay disciples following a particular religious master (*sujia dizi* 俗家弟子) or still in society (*shehuishang* 社会上)” (Bloch 2019, 178). Just as Daoists are devoted to their spiritual beliefs and practices, blue zone centenarians demonstrate great devotion and commitment to their faith and prayers. They are not only religious and

accepting of life circumstances, but exhibit considerable positivity and appreciation.<sup>28</sup> For instance, in Nicoya, the centenarian

Panchita's faith was amazing—her unwavering belief that no matter how bad things got, God would take care of everything. Indeed, thinking back, I realized that most of the 200 centenarians I had met believed in a similar guiding power. The Seventh-day Adventist faith was rooted in a strong faith tradition; Okinawan elders believed that their deceased ancestors watched over them; and Sardinians were devout Catholics. (Buettner 2012, 19)

While subscribing to differing faith traditions, what blue zone centenarians have in common is that they “tend to relinquish control of their lives to God” and “go through life with the peaceful certitude that someone is looking out for them” (2012, 210). Daoists likewise believe in surrendering themselves to the Dao as captured by the “spiritual ideal known as *wuwei* [无为], that is, nonaction or effortless action” (Ivanhoe 2011, 127). This implies that, instead of relying on one's conscious mind, one allows a supernatural insight or intuition to help one along in life (see Graham 1989).

Practicing downshifting and minimizing stress, blue zone centenarians are “wise enough to know that many of life's most precious moments pass us by if we're lurching blindly toward some goal” (Buettner 2012, 284). For instance, in Ikaria, people make time for spontaneity, and the community shares the belief that people should work to live rather than live to work. Following the principles of “contentment” (*zu* 足) and being “free from desire” (*wuyu* 无欲), Daoists likewise stress the value of life over money even if much of society leans the other way (Joshi 2020).<sup>29</sup>

As one Ikarian exclaimed, people here “wake up late and always take naps. . . Have you noticed that no one wears a watch here? . . . We simply don't care about the clock here” (Buettner 2012, 234-35). Likewise,

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<sup>28</sup> In some blue zones, the predominant religious doctrine also prioritized healthy longevity as with Adventists who believe “God wants us to be healthy” (Buettner 2012, 138) thereby providing a strong (i.e. divinely inspired) motivation to engage in healthful living.

<sup>29</sup> In line with Daoist expectations, no centenarians mentioned in Buettner's blue zone interviews appeared to be lawyers, business executives, politicians, economists, or hailing from other high-stress, high-paying occupations with the exception of one nonagenarian medical surgeon.

prioritizing simplicity, reducing stress, and minimizing materialism, Daoists would rather spontaneously submit to nature's clock than to rigidly adhere to man-made divisions of time.

## The Social Dimension

Research on the blue zones suggests that social connectedness contributes positively to longevity with the “power nine” telling us to make family a priority.

The most successful centenarians we met in the blue zones put their families first. They tended to marry, have children, and build their lives around that core. Their lives were imbued with familial duty, ritual, and a certain emphasis on togetherness. . . Their lifelong devotion has produced returns: Their children reciprocate their love and care. Their children check up on their parents, and in four of the five blue zones, the younger generation welcomes the older generation into their homes. (Buettner 2012, 290-91)

In the blue zones, elders are not abandoned but taken care of by younger family members, especially daughters and granddaughters, and there is respect for the aged. Thus, many elders feel “a strong sense of service to others” as they actively continue to “care for their family” (2012, 190).

Although family does not receive much emphasis in classical Daoist texts, respect for elders resonates with Daoism and plays an important role in the precepts of the religion (Ai 2006, 155; see Kohn 2004). While there are legendary stories of Daoist hermits living extensively long lives, John Blofeld's experience living among monastics suggests that they still form a community even after they leave ordinary society and dedicate themselves to self-cultivation (1978). These communities are different: “Daoists aim to set themselves apart from ordinary society and create communities that are clearly distinct” (Kohn 2010, 71).

On another level, Daoists value the healthy integration of sexuality into one's life. This echoes the blue zones feature of long-lasting marriages and

life-partners who support each other.<sup>30</sup> The unmistakable presence of children and grandchildren among blue zone centenarians also connects with ideals of nourishing life, given that conceiving healthy children is “naturally one of the oldest and most basic objectives of nourishing life” (Dear 2012, 22).

Another blue zone recommendation is to surround oneself with others who share “blue zone values.” “This is perhaps the most powerful thing you can do to change your lifestyle for the better” and “it’s much easier to adopt good habits when everyone around you is already practicing them” (Buettner 2012, 293-4). The three island regions of Okinawa, Sardinia, and Ikaria and the remote peninsula of Nicoya have limited contact with the outside world, making this easier to achieve. Still, even in Loma Linda in densely populated Southern California, “most Adventists seem to hang out with other Adventists” (2012, 161). In these communities, reinforcement of values within the group and geographic region appears to foster longevity-enhancing lifestyle behaviors and practices. As one Ikarian explains,

In Samos [a neighboring island], they care about money. Here we don’t. For the many religious and cultural holidays, people pool their money and buy food and wine. If there is money left over, they give it to the poor. It’s not a ‘me’ place. It’s an ‘us’ place. (2012, 235)

Like many blue zone centenarians, Daoists take “a non ego-centered approach to the world . . . [although] formulating a personal rather than social ideal, they support compassion, love, generosity, and openness toward all” (Kohn 2009, 93).

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<sup>30</sup> As for sexual intimacy, Buettner suggests in passing how some blue zone elders may still be having active sex lives. For instance, in Ikaria people live long and “die quickly, often in their sleep, and—occasionally—after sex” (2012, 251).

## Conclusion

Comparing Daoist prescriptions for longevity with those based on blue zones research, a high degree of overlap emerges across the four lifestyle domains of diet, exercise, mindset, and relationships.<sup>31</sup> In fact, many lifestyle recommendations associated with successful aging in the blue zones not only resemble but also validate longstanding Daoist prescriptions for advancing health and longevity.

For example, following nature and encouraging nourishing life practices for oneself as well as for other people and all living beings is an important principle in Daoism.<sup>32</sup> Similarly, blue zone centenarians typically live close to nature, tending gardens, raising sheep, going for long hikes, eating plant-based diets, and enjoying non-technological spaces. For instance, in Sardinia many centenarians “worked hard their whole lives as farmers or shepherds. Their lives unfolded with daily and seasonal routines. They raised families who were now caring for them. Their lives were extraordinarily ordinary” (Buettner 2012, 40).<sup>33</sup>

Spending time in nature and away from urban conglomerations is characteristic of both traditional Daoist practitioners and contemporary blue zone centenarians. Both prefer to spend ample time in the wilderness, mountains, and remote natural areas, that is, in places unperturbed by man-made pollution and noise. This allows them to breathe in the freshest air and absorb the healthiest *qi*.

Valuing and setting aside time to spend in nature is further reinforced by the community. Thus, Adventist communities reinforce their values by taking an entire day off from work and technology to relax, pray, and go on

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<sup>31</sup> The point here is not to minimize differences across places, peoples, and traditions, but to highlight what appears to be great commonalities when it comes to advancing longevity.

<sup>32</sup> Daoists emphasize “naturalness” (*ziran* 自然) both in terms of one’s internal disposition and the natural environment (see Liu 2013; Wang 2015; Miller 2017).

<sup>33</sup> The obscurity of these centenarians also resembles how Daoist sages seek to avoid fame (e.g., Graham 1989) while the rhythmic alternation and rotation of seasons and the transmission from one generation to the next is like the idea of yin and yang influential in Daoism (e.g., Wong 1997).

nature walks with family and friends.<sup>34</sup> Aside from reducing physical and psychological stress, such partial delinking from dominant norms of modern societies may facilitate longer and healthier lives. Here again parallels with Daoism are obvious: Daoists are true champions when it comes to taking time away from the hectic pace of industrial and urban society for purposes of meditation, friendship, and nature immersion.

Another important takeaway from blue zone centenarians is the multiple benefits obtained from integrating health practices into everyday life. Gardening is a prime example. “Working in a garden requires frequent, low-intensity, full-range-of-motion activity. You dig to plant, bend to weed, and carry to harvest. Gardening can relieve stress. And you emerge from the season with fresh vegetables—a blue zones trifecta!” (Buettner 2012, 269).

Similarly, integration is a prominent theme in longevity practices, many of which combine physical movements, breathing, and meditation or mental focus. This sort of integration, furthermore, appears in Daoist ritual performance:

Prostrations, bows, and walking patterns are designed to open blockages in the spinal column and move energy from the base of the spine to the top of the head. In addition, the alternation of kneeling, standing, prostrating, and bowing is an excellent way to strengthen tendons and bones, maintain flexibility and mobility, and keep the energy flowing. (Wong 1997, 169)

On a final note, this study provides insights into, and validation of, the Daoist concept of “unselfconsciousness” (see Ivanhoe 2011). Centenarians in the five blue zones do not seem to have received much influence from Daoist cosmology nor is there much evidence of them having an explicitly Daoist awareness. Nevertheless, to a large extent they appear to reflect unselfconscious, that is, spontaneous and natural, models of Daoist living as they incorporate many activities and behaviors resembling nourishing life practices into their daily lives.

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<sup>34</sup> As one Loma Lindan interviewee mentioned, “It reminds us that we don’t need to have all the answers, that we recognize our finite capabilities, and that we are dependent on God” (Buettner 2012, 150).

In the same way that Dao “cannot be perceived through normal sensory channels nor understood by rational thinking” (Wong 1997, 28), in blue zones people may have been unselfconsciously following the Dao of longevity. Perhaps this is just what one should expect from Dao. As P. J. Ivanhoe notes, an important theme in Daoism going back to its earliest texts is that “those who have mastered the Way are in some important sense unselfconscious about their actions and themselves” (2011, 127).

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