

Committee 1
Symmetry in Its Various Aspects:
Search for Order in the Universe

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Integrating Science and Nature in a Global Health Care System

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**Integrating Science and Nature in a Global Health Care System:
The Role for Modern Naturopathic Medicine**

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Introduction

The “holistic health” movement can be viewed as a part of the perennial struggle between two philosophically divergent views of Western medicine that have contended with each other since at least Greek times.¹ It is perhaps best expressed by Rene Dubos in his classic text, *Mirage of Health: Utopias, Progress & Biological Change*. One side of this divide is represented by the followers of Asclepius, the Greek god of medicine. The other side is represented by Hygeia, the goddess of health and one of the two daughters of Asclepius. It is her name that gives us the word *hygiene*, the “science of health and the prevention of disease.”²

According to Dubos, “The myths of Hygeia and Asclepius symbolize the never-ending oscillation between two different points of view in medicine. For the followers of Hygeia, health is the natural order of things, a positive attribute to which men are entitled if they govern their lives wisely. According to them, the most important function of medicine is to discover and teach the natural laws which will ensure a man a healthy mind in a healthy body.

“More skeptical, or wiser in the ways of the world, the followers of Asclepius believe that the chief role of the physician is to treat disease, to restore health by correcting any imperfections caused by the accidents of birth or life.”³

The holistic health movement revived a number nineteenth century “medical sects” such as “homeopathy, herbalism, and naturopathy.”⁴ While herbalism is ancient and universal and homeopathy is of European origin, naturopathy is a uniquely American phenomenon. It emerged as an integration of European “nature cure,” which used primarily water treatments, dietetics, fasting and exercise, with American homeopathy and eclectic medicine. Eclectic medicine is a profession that flourished during the late nineteenth and early twentieth centuries and that began the scientific application of the herbal medicines of the immigrant Europeans as well as those of the native Americans. Along with the profession of public health, naturopathy represents the core of the nineteenth century hygiene movement that is properly credited with many of the health advances of the twentieth century.⁵

During the twentieth century, conventional or “allopathic” medicine, also known as biomedicine, attained hegemony over the delivery of health care, and many of the descendants of the hygiene movement were pushed into subsidiary or alternative roles.⁶ The holistic health movement of the 1970’s represents the latest resurgence of the Hygeian tradition, largely in response to the perceived mechanization and impersonalization of modern biomedicine. American naturopathy, now known as naturopathic medicine, is experiencing a resurgence that started with the holistic health movement and continues unabated with the accelerating interest in complementary and alternative medicine (CAM). This is in part due to the fact that naturopathic medicine appears to be “pre-adapted to the philosophy and therapeutic techniques of the holistic health movement.”⁷ No doubt it is

also because modern naturopathic physicians are unique in North America as the only physician level health care providers who are trained to integrate a comprehensive array of CAM therapies.⁸

Modern naturopathic medicine has committed itself to the integration of the ancient wisdom of healing with the modern science of biomedicine. While this tendency has been present from the beginning of naturopathy, it is best exemplified by the founding of the John Bastyr College of Naturopathic Medicine in 1978 in the city of Seattle, Washington, USA. Now known as Bastyr University and operating programs in acupuncture, nutrition, and health psychology, it became the first true research institute in the naturopathic profession. In 1994 it received one of the first research grants from the Office of Alternative Medicine at the National Institutes of Health.

However the move toward integrating the traditional and the modern medicine to provide appropriate health care is not limited to the naturopathic profession nor even to the developed world. In the same year that Bastyr University was founded, the World Health Organization promulgated an audacious goal of “Health for All” which mandated that health officials work toward providing primary health care for all of the citizens of this planet. It was recognized then that one important way to accomplish this would be to foster cooperation and mutual respect between traditional and modern practitioners. One year earlier, the Thirtieth World Health Assembly had adopted a resolution that traditional medicine should be promoted and integrated with modern Western medicine.^{9,10,11}

For all of its technical prowess, modern Western medicine has disregarded ways of

looking at health and disease, as well as many potential techniques that can promote health and well-being. There is also a growing recognition that to provide affordable health care, whether it be in the developing world or the developed, countries and health care systems will have to find ways of integrating the principles and practices of traditional health care, whether they be considered alternative, complementary, or natural medicine.

Recently the World Health Organization estimated that probably 80% of the world's population only access primary health care is through herbalists. In other words their health care is what in the Western world is known as "alternative" medicine. From a global perspective, this medicine is hardly alternative. Common sense suggests that the delivery of primary health care to all of the citizens of the world will require the integration of traditional and modern medicine. While most have focused on the examples of traditional Oriental medicine and Ayurvedic medicine, the American experiment with naturopathic medicine really represents the modern development of the traditional medicine of Europe and North America. The naturopathic medicine profession is an important part of the globalization of health care.

What is a Naturopathic Physician?

The terms *naturopathy* and *naturopathic medicine* were coined in the late nineteenth century in the United States, but the roots of naturopathic medicine go back thousands of years. An eclectic system of healing, naturopathy draws on the healing wisdom of the world's traditional cultures, including India (Ayurvedic), China (Taoist), and Greece (Hippocratic).

Naturopathic physicians are the only general practitioners of medicine trained in a wide variety of natural therapies. The U.S. Department of Labor defines the naturopathic physician as one who "diagnoses, treats, and cares for patients, using a system of practice that bases its treatment of all physiological functions and abnormal conditions on natural laws governing the body, utilizes physiological, psychological and mechanical methods, such as air, water, heat, earth, phytotherapy (treatment by use of plants), electrotherapy, physiotherapy, minor or official surgery, mechanotherapy, naturopathic corrections and manipulation, and all natural methods or modalities, together with natural medicines, natural processed foods, and herbs, and natural remedies..."¹² Major surgery and the prescription of most drugs are excluded from naturopathic practice.

Naturopathic medicine is a distinct profession of primary health care physicians whose practitioners, while they make conventional disease diagnoses, are more oriented to prevention, education and promotion of optimal health and wellness rather than just treatment of disease. The following principles form the foundation of naturopathic medicine and are continually reexamined in light of current scientific advances.

- ***First Do No Harm.*** Preferred are the least invasive diagnostic procedures, treatments and medicinal substances with minimal risk of harmful side effects.
- ***Prevention.*** Physicians assess risk factors, make early interventions, and promote wellness by supporting patients to create healthy lifestyles.
- ***The Healing Power of Nature.*** Naturopathic medicine recognizes and encourages the inherent, ordered, and intelligent healing process in each individual.

- ***Treatment of the whole person.*** Physicians address the complex interactions of a patient's physical, emotional, mental, environmental, genetic, social and spiritual aspects.
- ***Identification and treatment of the causes of disease.*** Rather than merely eliminate symptoms, physicians identify and remove underlying causes of illness.
- ***Doctor as Teacher.*** The physician educates and develops patient self-responsibility, and the therapeutic potential of the doctor-patient relationship is valued and cultivated.

Naturopathic medicine integrates centuries-old knowledge of traditional, non-toxic therapies with the best of modern medical diagnostic science and standards of care. The scope of practice includes all aspects of family care, from natural childbirth to geriatrics. The few data that exist indicates that naturopathic physicians see a wide range of patients, both in terms of age and chief illness.¹³

While naturopaths in Europe, Australia and New Zealand function more as limited health practitioners, those in the United States and Canada have developed into a profession of physician level providers, very similar to the professions of osteopathic, allopathic and chiropractic medicine.¹⁴ Naturopathic physicians receive four years of education in residential professional schools which emphasize both didactic and clinical education. The requirements to enter these schools are similar to those required to enter allopathic and osteopathic schools. Graduates of approved programs are eligible to take the Naturopathic Physicians Licensing Exam (NPLEX) which is offered by the newly formed North American Board of Naturopathic Examiners. These exam results are used for licensing

purposes by the eleven states and one territory that currently license naturopathic physicians, Alaska, Arizona, Connecticut, Hawaii, Maine, Montana, New Hampshire, Oregon, Puerto Rico, Utah, Vermont and Washington. The District of Columbia registers naturopaths who have licensure elsewhere. At least two of the five Canadian provinces that license naturopaths (British Columbia, and Ontario) can also use the results of the NPLEX..

Traditionally, naturopathic physicians have worked in private office settings. An increasing trend, particularly in the West, is the establishment of associate practices and interdisciplinary clinics, which bring together the services of a diverse group of practitioners. Referrals are made to other health care professionals, such as medical specialists and chiropractors whenever appropriate.

However, the venues available for practice are changing. In 1994, the Washington State Department of Health designated naturopathic physicians as one category of “general care providers.” Naturopaths in that state are now eligible to have their medical school loans forgiven if they agree to work in one of the medically under-served areas of the state. More recently a law was passed which mandated that insurers cover all categories of licensed providers, which include naturopathic physicians and acupuncturists. In response to this, several HMO’s have credentialled naturopathic physicians as primary care providers in their networks.

Another exciting development is the creation of integrated settings where naturopathic physicians work together with their allopathic counterparts. In 1996, Seattle/King County Department of Health opened the Natural Health Clinic in an existing

community health center in South King County. A team of allopathic doctors, naturopathic doctors, nutritionists and acupuncturist provide therapy to a community that includes citizens that all too often have not had access to competent practitioners of complementary medicine.

In 1998, Cancer Treatment Centers of America, a hospital based program that had long offered nutritional therapies to its cancer patients, inaugurated a Naturopathic Medical Program in its hospitals. They now have naturopathic doctors and residents working in two of their hospitals.

Earlier this year the University of Bridgeport College of Naturopathic Medicine (UBCNM) collaborated with the Yale/Griffin Prevention Research Center in Derby, Connecticut to open an Integrated Medical Clinic.¹⁵ The Clinic is co-directed by David Katz, M.D., M.P.H., faculty at the Yale University School of Medicine, and Christine Girard-Couture, N.D., who is on the clinical faculty at UBCNM. This is likely the first of many collaborative arrangements that UBCNM will arrange.

The evidence shows that the overwhelming majority of people who utilize alternative medicine practitioners also see conventional doctors.¹⁶ Having a place where a patient can see both a conventional practitioner and one who has expertise in natural medicine has been extremely popular with the patients who use these facilities.¹⁷

Research

Scientific research on efficacy and the cost-effectiveness is essential to the acceptance of alternative methods.¹⁸ It is all too often assumed that the therapeutic methods

used by naturopathic physicians and other alternative health care practitioners are all scientifically unfounded. This quite far from the truth. It should also be remembered that a minority of conventional techniques have been properly evaluated by appropriate clinical trials.¹⁹

Naturopathic methods are well supported by scientific research drawn from peer-reviewed journals from many disciplines, including naturopathic medicine, conventional medicine, European complementary medicine, clinical nutrition, Oriental medicine, phytotherapy (herbal medicine), pharmacognosy, homeopathy, psychology and others. The two-volume *Textbook of Natural Medicine*, recently published in hardback form by Churchill-Livingstone, cites over five thousand references in the scientific literature documenting the efficacy of naturopathic therapies.²⁰ Information technology and new concepts in clinical outcomes assessment are particularly well suited to evaluating the effectiveness of naturopathic treatment protocols and are being used in research at naturopathic medical schools and in the offices of practicing physicians. Published research may be found in *The Journal of Naturopathic Medicine*.

In 1999, the National Institutes of Health in Bethesda, Maryland, USA upgraded the Office of Alternative Medicine to the National Center for Complementary and Alternative Medicine (NCCAM). Two naturopathic physicians, Konrad Kail, N.D., and Leanna Standish, N.D., Ph.D., were appointed to the center's Advisory Panel.

Standards

During the nineteenth century there was no professional licensing of any sort. Early

attempts to establish licensing were rejected in the early nineteenth century because of the fear that they would lead to the rise of a professional elite. It was felt by those in the administration of president Andrew Jackson that this eventuality would jeopardize the young democracy.^{21,22} However, around the turn of the twentieth century, licensing laws for health care practitioners were universally implemented in North America to protect consumers from poorly trained and unscrupulous practitioners. Licensing has become the main legal mechanism for maintaining educational and professional standards.

The first naturopathic professional medical societies were formed at the turn of the century, and naturopathic medical conventions in the 1920's attracted more than 10,000 practitioners. At that time there were more than twenty naturopathic medical colleges, and physicians were licensed in a majority of states.²³

Unlike its counterparts, osteopathic medicine and chiropractic, naturopathic medicine began to decline in the 1950's and 60's. As result, many states abandoned licensing statutes for naturopathic physicians. By 1985, only five states retained licensing laws, and in some of those states, the practice was quite limited.

Since 1990 six states have passed new licensing laws, and a number of other states have updated their laws to reflect current training standards. In the past two years several other states have introduced legislation to license scientifically trained naturopathic physicians.

During the decline of naturopathic medicine a number of mail order degree mills sprang up. Some of these institutions still operate and are apparently quite lucrative. The

holders of their diplomas can call themselves naturopaths in states without licensing laws. There is some evidence that these practitioners have the potential to cause great harm to the public. On the other hand, naturopathic physicians who are licensed have very low malpractice rates due to the paucity of claims against them.

Since 1984, the American Association of Naturopathic Physicians has represented the interests of licensed naturopathic physicians as they work to promote the development of credible, science-based naturopathic medicine.

Education and Clinical Training

Since the beginning of naturopathic medicine early in the twentieth century, high educational standards have been in place. Though naturopathic medical schools have never had the resources of the more well endowed allopathic and osteopathic medical schools, they have nonetheless striven to train naturopaths in both the biomedical sciences as well as natural therapeutics.

Dr. Benedict Lust founded the American College of Naturopathy in New York City at the end of 1902. By 1927, an American Medical Association study listed twelve naturopathic schools.²⁴ At one time, Pennsylvania boasted five naturopathic colleges. In 1986 I met a Dr. Marsteller who received his naturopathic doctoral degree from Hahneman Medical School in Philadelphia in 1931. Hahneman, named for the founder of homeopathy, was originally a homeopathic medical school that eventually became one of the modern allopathic medical schools.

Modern naturopathic medical colleges are four-year professional schools with

admission requirements comparable to those of conventional medical schools. There are currently five schools in North America qualified to educate naturopathic physicians: Bastyr University School of Naturopathic Medicine in Kenmore, Washington, Canadian College of Naturopathic Medicine in Toronto, Ontario, National College of Naturopathic Medicine in Portland, Oregon, Southwest College of Naturopathic Medicine in Tempe, Arizona, and the newly founded University of Bridgeport College of Naturopathic Medicine in Bridgeport, Connecticut. UBCNM is the first naturopathic medical school to operate in the eastern half of America in over 50 years and the first to be founded within a regionally accredited university. Other institutions have announced plans to start naturopathic medical programs.

The Council on Naturopathic Medicine (CNME) has been the only programmatic accrediting agency for naturopathic medicine since 1981. The CNME accredits schools that follow standards involving completion of a pre-medical education followed by a four-year residential curriculum with 4,500-5,000 hours of instruction. Basic medical science and clinical diagnostic skills are taught during the first two years. The core therapeutic curriculum includes instruction in acupuncture, nutritional sciences, counseling, botanical medicine, homeopathy, Oriental medicine, childbirth, physiotherapy, naturopathic manipulation, minor surgery, and other medical procedures. Students undergo extensive, supervised clinical training in outpatient naturopathic clinics. One of the new challenges of the profession is to create residency positions to strengthen clinical postgraduate training.

The Future

It is said that the Chinese have a curse, "May you be born in interesting times."

Those of us alive at the beginning of the twenty-first century must feel that we have inherited this curse in a big way. The changes that are currently underway in the global economy and culture are some of the most dramatic ever faced by the human race. It is entirely possible that the current changes are the most dramatic since what is termed the Neolithic Revolution. That revolution in human culture led to the rise of what we call civilization. In another hundred years, human civilization may be as different from what we know now as the Sumerian empire was from Late Paleolithic culture.

Yet the human needs for a healthy life remain unchanged. At a minimum, they include clean air and water, nutritious food, and caring community.²⁵ Another prerequisite is good primary health care that is affordable and sensitive to social, mental and spiritual needs, as well as the physical. Modern American naturopathy and the World Health Organization are in agreement that this health care must integrate the best of both modern biomedicine and the ancient healing traditions of the world.^{26,27}

As one of the inheritors of the hygiene movement, the naturopathic medical profession can play several important parts in the global move toward integration. Naturopathic doctors, like traditional doctors in China, are trained in both biomedicine and traditional natural healing. By continuing to deliver integrated natural medicine, naturopathic physicians are working to develop integral medicine in North America.

A second important role is as experimenters and role models in the difficult task of integration.²⁸ By engaging in rigorous scholarship and research of traditional medicine, the next generation of naturopathic physicians will help to discover which traditional therapies

are best suited to be integrated with conventional medicine, and in which settings. By engaging philosophically with the difficult questions of integration, they can model the courage required for this task. As psychiatrist and futurist Dr. Charles Johnston has said, the good news is that we get to be pioneers and pioneering is very exciting. On the other hand, the bad news is we get to be pioneers and pioneering is full of real dangers and failures.²⁹

Finally, naturopathic physicians can play leadership roles in the institutionalization of integrated health care. With their understanding of both the conventional and the traditional worlds of health care, they are uniquely qualified to bring the two worlds together in harmony. One of the goals of the University of Bridgeport College of Naturopathic Medicine is to develop a cadre of naturopathic physician-leaders who have additional training in public health and health care management. Some of these individuals may soon be involved in countries around the world finding culturally appropriate ways to bring together these two healing cultures.

Summary

Today's health care crisis, with its spiraling costs and the rising number of chronic, degenerative diseases too often unresponsive to current treatments, has stimulated the renewal of naturopathic medicine and traditionally-based alternative healing modalities. More and more people are choosing natural medicine for primary care or in conjunction with conventional treatment. Naturopathic medicine offers many documented short and long-term cost containment benefits and, with its emphasis on causation, prevention, health promotion and lifestyle changes, will play an important role in shifting our health care

system from a disease to a wellness orientation

The terms “holistic” medicine, and now “complementary” and “alternative” medicine (CAM), cover a wide variety techniques and practices. To the degree that this is so, the terms are, or have become, meaningless residual definitions.³⁰ However, naturopathic physicians have been holistic, like their traditional healer counterparts throughout the world, since before the term was coined by Jan Christian Smuts in 1926.³¹ Naturopathic medicine is poised to play an important role in a global health care system that respects the needs of whole people and whole communities.

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