

Notes on Randolph's Book, *Environmental Medicine : Beginnings & Bibliographies*

“How clinical ecology started as an environmentally focused specialty of medicine ... “ For this he names “Arthur F. Coca, Albert H. Rowe, and Herbert J. Rinkel as “the three pioneer clinical observers most responsible for this development.” (ix)

Where was Randolph active:

1. rural southern Michigan between Chicago and Detroit, in Hillsdale County.
2. Ann Arbor
3. Milwaukee, WI, and Chicago.
4. There was also two years in the Boston area.

“Although I grew up in a relatively self-sufficient rural agricultural society, I ended up 80 years later in being primarily concerned with the health hazards association with an industrial urban environment.” (x)

He mentions the widespread change in lifestyle from rural farm life to living in an urban, industrialized society.

He also mentions his “environmental-medical interest led to the development of techniques to demonstrate the inciting and perpetuating roles of the commonplace environment in many chronic illnesses, especially those occurring highly susceptible individuals.”

“All degree of environmental susceptibility seem to be involved. As one drifts to the edge of this ever-expanding whirlpool, such environmentally related medical problems are more annoying than impairing, more intermittent than continuous. But with time, increasing individual susceptibility and cumulative specific exposures, a vulnerable person tends to be drawn increasingly deeper into these environmental problems of the modern world. Sooner or later, and despite all efforts to remain physically active and mentally alert, many victims tend to become so chronically ill that they sink into impaired productivity and, sometimes, functional disability.” (xi)

Randolph was particularly interested in food allergies and chemical exposure problems.

Important historical trends related to the development of environmental medicine

(1) The germ theory of disease. “The concept of infectious disease came to this country precipitously in 1880, although its full implications were not widely applied for at least another generation or two.” (xii)

(2) “The second great thrust of the environment on modern medicine was what later came to be called the allergic interpretation of illness, in which given environmental exposures impinged on the health of susceptible persons. Individual susceptibility to pollens and animal danders manifesting hay fever and asthma was described by the Englishmen, Bostock and Elliotson, by 1830.” (xii) Then came the work of Salter, also of London, in 1862.

Boyhood home – Jerome, Michigan, born there in 1906, the third of six children

“The germ theory of disease, which had developed gradually in Europe over several decades, arrived suddenly on this side of the Atlantic in 1880. Prior to that time Americans had been preoccupied with our Civil War, including the turmoil preceding it, the trauma of hostilities, carpet bagging and the social and political adjustments following it. But after the demonstration of Koch's famous postulates in Germany

in 1880, one American institution after another accepted the germ theory of disease as fact and began teaching this concept of illness.” (7)

By 1928 Randolph had become an accomplished typist, which, he says “was unusual for students in 1928.”

In medical school at the University of Michigan, he planned to become a psychiatrist.

Randolph recounts his experience doing clinical work in medical school with his first two patients:

“My first two patients were disastrous and prophetic, respectively. The first patient, an aged cardiac male, was propped up in a semi-reclining position in bed to be examined. I propped him up further in order to listen to the back of his chest, while my associate listened to his heart. I commented, “I don’t hear anything anymore, do you?” He said, “No.” Whereupon we called the intern who pronounced our first patient dead. A student nurse added to the indignity of this disaster by charting, “Patient died while being examined by junior medical students.” Although I was not amused by this experience, nor so the instructor, Thomas Findley, later Professor of Medicine at Tulane University Medical School, at least each time I have seen him since he starts to smile before we have a chance to shake hands.” (11)

“The second patient, a 35-year-old housewife, was what we were later told was a profound hypochondriac. Indeed, there was no end to her complaints. It must have taken me 40 minutes to recite this patient’s history to our instructor, who to my abject astonishment became progressively amused and apparently disinterested as I related this long story. The crowning insult, as far as I was concerned, was his crack at the conclusion of my history: ‘The more numerous a patient’s complaints, the less significance of any of them.’ I argued with him—as if to question his medical omnipotence—which only seem to amuse him further. For many years, I still harbored a dim view of this doctor’s medical ability.” (12-13)

“During my senior year in medical school (1933) , I attended my first national allergy meeting in Atlantic City, New Jersey. This provided the opportunity of at least seeing and hearing pioneers in this field who were active at the time.” (13)

Internship and Residency Training, 1933-1937

Internal medicine at the University of Michigan Medical School. He chose Allergy to specialize in “as it seemed to me the largest and least understood of any of the so-called subspecialties of internal medicine. Consequently, I began spending my spare time in the allergy clinic and in reading about allergy and immunology. I even too Coca, Walzer and Tommens book, Asthma and Hay Fever in Theory and Practice, with me on my vacation.” (14) He published his first article on allergy in 1935, as a joint author with Dr. John Sheldon.

At the time he had a probably diagnosis of Tuberculosis.

“In late 1936 I looked where special training this relatively new field of allergy could be obtained. There was only one such medical school affiliated course available. This was a Fellowship at the Massachusetts General hospital and the Harvard Medical School under the direction of Francis M. Rackemann. I applied in person, obtained the position and lived in the Boston area from July, 1937 through July, 1939. I was only the third person to be trained in this position.” (15)

“Considerable time was spent he first year in making blood determinations of histamine in asthma and eosinophilia. A suggestive increased level of blood histamine over normal was found during paroxysms

of asthma as compared with intervals between attacks and with normals, but normal levels of blood histamine were found in several case of high blood eosinophilia.” (15)

“My major research interest was concerned with allergy to molds, which was published in 1938. I also studied the role of histamine in allergy, which led to a publication in 1941.” (16)

Private practice in Milwaukee, Wisconsin, 1939-1942

There he learned much about food allergies, practicing with Dr. Squier and his associate Dr. Fed Madison.

He married Janet Sibley of Chicago while there, and their first son, Jonathan, was born in 1942. (17)

“Although I was aware of the controversy existing for several years between Dr. Robert Doerr of Switzerland and Dr. Coca, I was unable to find a clear statement of Dr Coca’s thesis.” (17)

Private Practice, Chicago, 1944-1950

“The only physicians I knew in Chicago were Michael Zeller and two doctors in practice from the University of Michigan Medical School. Being naïve, I did not appreciate that not having attended medical school where nor having any of the my training Chicago was to be a major disadvantage.” (23)

“Soon after arrival, I announced that I was interested in food allergy, but did not perform skin tests for its detection. This announcement turned out to be both good and bad. Although it attracted attention and referrals, it also antagonized many other allergists, most of whom were performing skins tests with food extracts routinely and interpreting them as +, ++, +++, and ++++ in the relative absence of clinical evaluations.” (23)

He recorded patient histories on the typewriter, and in doing so adopted the technique of practicing “poker-faced medicine.”

With the help of Herbert J. Rinkel, he diagnosed his own allergies to corn, wheat, and other cereal grains,

Symptoms of Food Allergy: Headache. Fatigue

Chemical susceptibility problem: “It is not, apparently, mediated by immunologic mechanisms. In keeping with the wisely accepted immunologic interpretation of allergy at this time, obvious nonimmunologic clinical observations were not acceptable.” (1954)

Other Environmental Exposures, 1951-1953

“At this stage of the development of clinical allergy, the three most commonly encountered materials responsible for individual susceptibility and chronic illnesses occurring in my practice were biological inhaled particles (pollens, spores, etc.), foods, and environmental chemicals. The subsequent relative significance of the chemical susceptibility problem is indicated by the fact that this order has since been reversed. Moreover, of the three areas in question, environmental chemical exposures re also presently associated with higher degrees of individual susceptibility and relatively greater persistence of susceptibility as well as more advanced clinical syndromes. Also, once individual susceptibility to one or a few environmental chemical exposures has developed, it almost invariably tends to spread to involve other combustion products and derivatives of gas, oil, and coal, to which one happens to be exposed in significant amounts—despite the common notion that these materials are ordinarily regarded as being

GRAS (generally regarded as safe). Finally, of the three areas under consideration (biological inhalants, foods, and chemicals), the chemical susceptibility problem has come to be far more often associated with impaired productivity and disability than the others” (78)

“brain-fag.”

“Referring to food allergy as food addiction has been a distinct improvement in vocabulary, especially when speaking to new patients relatively unformed on this subject.” (106)

“Finally, after seeking an alternative designation for allergy for several years, the substitute of clinical ecology was suggested and quickly accepted by me. This came about as follows. From time to time, when it became necessary to seek a new hospital appointment because of overcrowding, I had learned to go to the center where hospital bed occupancy statistics for metropolitan Chicago are kept on file. It did this in the late 1950s for the purpose of including a hospital with a bed occupancy rate of 70 percent or less. In the course of explaining my purpose and the reasons for seeking these data to a Mr. Sibley who was in charge, he commented” ‘What you are really doing is clinical ecology.’ After reading that ecology had first been used by Ernst Haeckel, a German biologist, to explain Charles Darwin’s contribution in 1868, I decided that this, indeed, was an excellent term to describe what I and others were trying to do. I was also interested that ecology had been widely used in biology for nearly a century, and was rapidly coming into popular use by 1960. I used the designation, clinical ecology, to describe my activities. Several medical colleagues stopped me to inquire what I was doing. After seeing the direction that this work was taking the name of the Rockwell M. Kempton Research Fund was also changed to the human Ecology Research Foundation.” (107)

“Another desirable change in differentiating clinical ecology from allergy was abandoning the words sensitivity, hypersensitivity, sensitize and sensitization—essentially synonyms for allergy in a limited immunologic sense—in favor of susceptibility, individual susceptibility and susceptible, because of their wider connotations.” (107)

The term “stress” was also abandoned as hopelessly ambiguous. (108)

“With at least a part of my medical and scientific vocabulary gradually straightening out by 1954, I was better prepared to integrate the concepts of addiction and ecology into the interpretation of the phenomenon of adaptation than if this had occurred earlier.” (108)

“Physicians did not ordinarily have the opportunity of exposing well patients to cumulative doses of foods or chemicals and watch them sicken initially, then become resistant, and eventually become sick again, as described by physiologists. Most patients were already wick when they were first seen by their doctors. To what they were reacting and for how long this had been occurring remained unknown. The trick in revealing this long-term and subtle impingement was simply to avoid such exogenous exposures on the basis of probability for a sufficiently long time to permit the inured patient to recover from their cumulative effects, then re-exposure of such a person to this avoided item(s) and observation for evidence of an acute reaction(s).

“The decision to incorporate the concept of adaptation as accentuated by individual susceptibility in the interpretation of clinical reactions to foods, exogenous chemical exposures and other human-environmental interrelationships was made by 1955 when a scientific exhibit was prepared for the Annual Meeting of the American Medical Association that year. After rejection of this initial application, this exhibit, prepared with eight other physicians who had been working closely with me, was presented at the Annual Meeting of the American Medical Association and the American Psychiatric Association, both in

Chicago in 1956 in the months of May and June, respectively.” (110) The exhibit, entitled “Specific Adaptive Illness” is pictured on p. 111.

Summary : Ecologically Focused Medical Care, p. 259-280.

“Ecologically focused medical care was designed initially for the management of selected chronically ill patients not responding satisfactorily to conventional medical care offered by traditionally trained allergists. But as these therapeutic failures were studied in greater detail, it soon became apparent that many of them had not been adequately appraised diagnostically. In addition to their localized manifestation of rhinitis, asthma, eczema, colitis and others, many also presented more generalized systemic syndromes. Previously unsuspected common foods were often demonstrated to be responsible for both their localized and systemic manifestations.” (261)

“As techniques developed to demonstrate these wider manifestations of clinical allergy, it became apparent that these physical syndromes often alternated with more advanced cerebral and behavioral disturbances. Also, in addition to inhaled particles (such as pollens, dusts, danders, and others) as well as commonly eaten foods, environmental chemical exposures were demonstrable as major causative factors in many of these chronic heretofore unexplained illnesses. Techniques then emerged in which these personal-environmental interrelationships were demonstrable under relatively controlled conditions. The program of comprehensive environmental means of performing intradermal or sublingual provocative tests were especially helpful. Since many of these concepts and techniques did not depend on apparent immunologic mechanisms, it soon became evident that allergy as defined immunologically was too limited to account for these illness-related demonstrable roles of chemicals and many foods to which these poorly understood chronically ill persons were found to be extremely susceptible. In the hope of avoiding confusion with traditionally trained allergists, this diagnostico-therapeutic program including both immunologic and non-immunologic mechanisms was simply referred to as clinical ecology.” (261-262).

“Meanwhile modern medicine drifted into an untenable position vis-à-vis the human environment—man’s intake and surroundings. In response to pressures from both within and from outside of the medical profession, medical academia had become progressively dependent on drug therapy. Most unfortunately, this relative environmental alienation of medicine occurred at the same time that the human environment was also becoming increasingly repetitious, noxious, and frequently toxic. Concurrently with academia’s progressive environmental disenchantment, an increasing number of people were becoming highly susceptible not only to commonly eaten foods, but also to chemical additives and contaminants of both the food and water supplies as well as to other environmental chemicals. This combination has been demonstrated to be impinging progressively on the health and welfare of an increasing number of humans. These environmental relationships, relatively unrecognized by the medical profession steeped in the specific etiology doctrine emanating from medical academia, are manifesting in apparently increasing levels of physical and mental illnesses. Moreover, medicine’s relatively untenable position in respect to the human environment has also been accentuated by poorly advised Federal regulatory efforts. These poorly considered regulations are not only impinging on the medical profession by accentuating bodily, analytical and drug-related mass-applicable medical care, but laxity at various levels in other governmental regulations has utterly failed to stem environmental pollution and contamination. The overall result of these trends has been increasing levels of chronic illness. IN selected instances characterized by extremes of individual susceptibility to these so-called chemical environment, this encroachment of the environment on health is manifesting as impaired physical and/or mental health characterized by diminished productively and, later, is often associated with functional disability. “ (262)

“In view of these relatively unrecognized illness-related present day environmental exposures and medicines’ continued preoccupation with its limited-specific etiology doctrine, the basic holistic nature of clinical ecology was found to have much wider medical applications that with illnesses previously designated as being of allergic origin. Indeed, clinical ecologists have come to take on many of the failures of the doctrine of specific etiology characterized additionally by excessive specialization which has dominated medical care for the past 100 years. My own case is an example of these present trend countering specialization in medicine. Although trained and certified in internal medicine and subcertified in allergy and immunology, during the past several decades I am practicing not as a medical specialist, as re most of my colleagues, but I am interested in all sustained chronic physical and mental illness not responding to conventional medical are, in which the history suggests the operation of environmental factors.” (262)