A Humanistic Approach to Health Promotion

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By

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In loving memory,

Robert N. Bellah, 1927 – 2013,

an inspiration to all his students

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“God is real since he produces real effects.”
—William James

PART I

1. WHY A HUMANISTIC APPROACH?

Many interesting and important questions about the human condition remain unresolved. Perhaps the most important is the question of free will, from which many other crucial questions derive. Can human beings make choices about how they want to live their lives? What is the basis for making choices about how one should live? Do human beings have the capacity to choose to act in accordance with moral principles and higher-order values? If so, where can we find these values?

For reasons explained in this book, because the rise of the empirical sciences has been so effective in enabling human control over the natural world, the prestige afforded modern science today has led most health researchers to assume that human nature is no different: human behavior can be analyzed and fully explained in terms of causal relationships. They assume that there is no such thing as free will; rather, behavior is the result of antecedent factors that cause the behavior in question (e.g., smoking, overeating, etc.). But, as we shall see, this is simply an unfounded assumption. We do not *know* this to be true.

In contrast, since ancient times, and now reflected in the worldwide division of the modern university into the sciences, social sciences and the humanities, a long tradition of scholars, intellectuals and philosophers has operated on the seemingly self-evident belief that people can and do make choices about what they want to do all the time. They believe that there is something palpably real about the experience of choice and that the ability to choose is the *sine-qua-non* of human morality. They believe that human conduct is motivated, at least in part, by the desire to do what is right and good. Perhaps not all the time but undeniably on occasion, people make choices on the basis of moral principles and values that matter. If this is the case, then the question becomes: how do we know–with reasonable assurance–what these values or principles are? Are love or justice, right and wrong, real? How do we know what they *truly* are? Where can they be found? Are they mere figments of our imagination, as empirical scientists who deny free will are wont to suggest? Although the scientific method has provided unprecedented knowledge about empirical cause-and-effect relationships found in the natural world, it cannot answer questions about the meaning and significance of human values, for reasons this book delves into in depth. Yet, without taking the capacity for choice into account, the

field of health promotion is missing something hugely important to understanding why human beings act the way they do.

If we want to know why people sometimes engage in behaviors that harm their health, then we need to develop a more comprehensive understanding of human decision-making. In many respects, health promotion found its unique calling based on the fact that people frequently appear to act irrationally and take up self-destructive activities (such as smoking), and that making them aware of the dangers is insufficient to lead them to stop; hence, the field's *raison d'etre* has been seen to lie in the search for currently unknown mysterious underlying causes. This book shows that we cannot simply assume that behavior is caused by independent variables that inexorably drive human acts. We need to come to terms with the idea that people might choose to act against a superficially obvious interest in self-preservation, and decide to smoke, or eat too much, or get drunk, smoke pot, fail to wear condoms, avoid strenuous exertion, and on and on, for reasons that evidently take precedence over a putative desire to live longer (e.g., the desire for immediate pleasure) (Sullum, 1998; Metzl and Kirkland, 2010; Tavernise, 2014). Is there anything more important than individual gratification, anything that might provide a basis for making a different choice? We need the humanities to make sense of human conduct. We need the humanities to clarify moral principles and values that matter and so appreciate how they guide us in making choices that enable us to become the kind of person we long to become. It is only by incorporating this knowledge into the work of health promotion that the field can begin to move towards the goal of helping people to be healthy and flourish as human beings, with all of the distinctive capabilities unique to the human condition.

This chapter sets the stage for the essays that follow and presents a preliminary framework for health promotion that takes the possibility of free will fully into account. I cannot maintain that this assumption is any more certain than its rejection, but I am convinced that operating on the alternative humanistic assumption will make work in the field more perceptive and sympathetic, more consistent with lived experience and observation, and more in line with the professed goal of taking action to expand the sphere of justice in the world. It will also help to explain why efforts to control behavior have thus far failed to pan out. *A Humanistic Approach to Health Promotion* explains how a humanistic approach offers more worthwhile goals for the field and a more ethically robust means for achieving them.

The text starts with a brief history of health promotion and the evolution of the types of health problems driving the leading causes of

morbidity and mortality. It then tracks these developments to the parallel rise of modern science. This background lays the foundation for understanding the current challenges facing the field posed by the central role of behaviors in contributing to premature sickness, disease and death today. To the extent that the reader accepts the argument that human behavior is categorically distinct from the cause-and-effect relationships that govern events in the natural world, then we will be in a better position to grapple with the complex questions of epistemology, ontology and ethics that must be addressed to bring health promotion in line with a more plausible and comprehensive account of human behavior. To anticipate, it will require us to examine the role of subjective consciousness in perceiving values and the role of language in bringing those values into human experience.

A Brief History of Health Promotion

The key point of this section is that the methods of research and practice in public health today have not kept pace with the changing nature of disease etiology. Due to a phenomenon referred to as the epidemiological transition, the leading causes of morbidity and mortality today are no longer led by infectious diseases but by chronic diseases, which are associated with behaviors such as smoking, obesity and physical inactivity. Thus, to achieve the goal of improving population health, the field needs to address the role of human behaviors in contributing to disease and death. But changing human behaviors poses categorically distinct challenges compared to efforts aimed at controlling the pathogens that cause infectious diseases. The field has yet to come to terms with this new challenge.

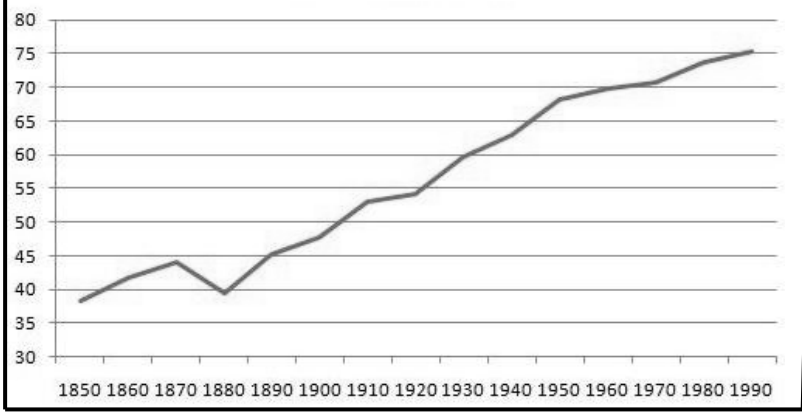
The respective proportions of infectious and chronic diseases present in the world today are summarized in the table below produced by the World Health Organization (WHO, 2008; see Table 1.1). For definitional purposes, **infectious diseases** are caused by pathogenic microorganisms, such as bacteria, viruses, parasites or fungi; the diseases can be spread, directly or indirectly, from one person to another. In contrast, **non-communicable diseases** (NCDs), also known as **chronic diseases**, are not transmitted from person to person. They are of long duration and generally slow progression. The four main types of non-communicable diseases are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.

Table 1.1: Leading Causes of Mortality Source: WHO, 2008				
		World (%)	**High income (%)**	**LMIC* (%)**
Communicable Diseases		32.3	7.0	36.4
	Infectious & parasitic	19.3	1.9	22.1
	Respiratory	6.8	4.4	7.2
	Perinatal	4.5	0.4	5.1
Non-Communicable		58.5	86.5	53.8
	Cardiovascular	29.1	38.3	27.6
	Cancer	12.5	26.0	10.2
Injuries		9.2	5.9	9.8
	Unintentional	6.3	4.0	6.6
	Intentional	2.9	1.9	3.1
* - LMIC = Low & Middle Income Countries				

Currently, chronic, non-communicable diseases account for an overwhelming proportion of disease burden in high income countries, 86.5%, and these days even a greater burden (53.8%) than infectious diseases in low- and middle-income countries too. The role of human behaviors in disease etiology today is actually even higher, to the extent that certain prevalent infectious diseases, in particular, HIV/AIDS and STIs, are also associated with behaviors such as unprotected sex, and many injury deaths are also due to behaviors such as car crashes (drunk driving), homicide and suicide. The significance of this shift has yet to be fully appreciated by researchers seeking to develop more effective prevention and control measures to reduce chronic disease burden. Instead, researchers continue to use the same research methods to analyze and explain chronic diseases that they use to explain the mechanisms of infectious disease pathology. Because the scientific method has been so effective in providing the means to control infectious diseases, scientists seek to explain human behavior nowadays as if it was no different than the behavior of a bacterium, more complex to be sure but fundamentally governed by the same cause-and-effect laws found throughout the natural world. For better or worse, however, chronic diseases cannot be prevented by attempting to identify the causal analogs of immunizations or antibiotics.

One oft-cited indicator of the success of the scientific method is the doubling of the age of life expectancy over the last 100 years (see Graph 1). Most people view this as unmistakable evidence of progress in medical science. Fewer people are aware that the bulk of these gains in *average* life expectancy are attributable to sharp declines in the death rates for children under the age of five due to success in combatting childhood infectious illnesses. When people escaped or survived early childhood infections in 1900, they could expect to live to the age of seventy, not much different than today (Montagu, 1994; Olshansky, Carnes and Cassel, 1990). Making similar gains in controlling chronic diseases has proven much more difficult. Critics further argue that the slow progress in the war on cancer, for example, often measured in months not years, has come at the steep cost of severe deteriorations in quality of life and prolonged suffering (Callahan, 2002). Unlike the largely successful search for cures for infectious diseases, medical treatments of chronic diseases have been dubbed "halfway technologies"–they stabilize patients but generally do not restore complete normal healthy functioning (Chalmers, cited in Veatch, 2005).

Graph 1.1: Rising Life Expectancy Rates, 1850 - 1990



To appreciate how we have come to find ourselves in this situation, it is helpful to put these developments in historical context. There are many outstanding texts that offer detailed descriptions of advances in medicine (Porter, 1997) but a brief summary will suffice for our purposes here.

Hippocrates is generally considered the founding father of medicine, based on his text, *Airs, Waters, and Places*, written in 400 BC. His text had

an enormous impact on the practice of medicine, held in esteem largely intact for the next twenty-plus centuries, a span of time that encompasses major milestones marking the beginnings of the field of public health. Public health professionals generally attribute the field's origins to the famous reports by Edwin Chadwick in his *Sanitary Conditions of the Labouring Population of Great Britain*, written in 1842, and its replication in the US, *Report of the Sanitary Commission of Massachusetts,* by Lemuel Shattuck in 1850. It is important to note that these reports were based on a pre-scientific understanding of disease etiology, where miasma theory attributed mortality rates to the "foul odours" exuded by corpses and other rotting matter. Set against a backdrop of the prevailing miasma theory, interest in cleaning up a polluted environment provided the backdrop for the legendary studies conducted by John Snow, the founding father of epidemiology, who tracked cases of a cholera outbreak in Soho, England, in 1854. Using a spot map to illustrate how occurrences of cholera were distributed around a central location, Snow traced the source of the outbreak to the Broad Street water pump. His investigation of the pattern of cases convinced the local council to disable the pump by removing its handle. Snow's work has since come to assume near-mythical status, including citation as the historical precedent for renewed interest in changing the environment advocated by proponents of the social determinants of health today. Yet it was not until 30 years later that the micro-organism, or agent of disease, present in the well's water was discovered.

It was not until the late 1800s that the methods of modern science became more widely accepted, codified and applied to explain the incidence and distribution of the most common diseases of the day. In 1884, Robert Koch advanced four postulates that laid the foundation for the germ theory of disease (see Table 1.2). Shortly thereafter, in a remarkable burst of scientific discovery, the microorganisms responsible for virtually all known infectious diseases were discovered and verified within short twenty-year time span between 1880-1900 (Rosen, 1993). Although effective immunizations and antibiotics were not discovered or developed for another 30-40 years, nonetheless, the germ theory of disease took root, putting medicine on firm scientific foundations.

Table 1.2: Koch's Postulates

- The microorganism must be found in abundance in all organisms suffering from the disease but should not be found in healthy animals.
- The microorganism must be isolated from a diseased organism and grown in pure culture.
- The cultured microorganism should cause disease when introduced into a healthy organism.
- The microorganism must be re-isolated from the inoculated, diseased experimental host and identified as being identical to the original specific causative agent.

As new immunizations and antibiotics (such as penicillin) began to be discovered in the early decades of the 20th century, the germ theory of disease became the dominant paradigm for explaining disease causation. Its power to treat infectious diseases was wondrously impressive and its appeal became firmly entrenched in the minds of medical scientists. The growing use of vaccines early in the 20th century also raised new ethical and legal concerns, particularly relevant to the nascent field of public health. In the historic 1905 case of *Jacobsen v. Massachusetts*, the US Supreme Court upheld a Massachusetts law that authorized the state Board of Health to require all citizens to be immunized against smallpox, firmly establishing public health's authority to marshal the police powers of the state to protect citizens from the potential for widespread health threats. Citing the state's authority to legislate "for the common good, for the protection, safety, prosperity, and happiness of the people," the Court's ruling established the precedent of protecting the common good over individual liberty rights.

Buttressing the status of the germ theory of disease, another major milestone in medical science was the first-ever randomized controlled trial (RCT), a test of the effectiveness of streptomycin to treat tuberculosis, conducted in 1948 (Medical Research Council, 1948). Following these discoveries and other developments (e.g., refrigeration, improved sanitation), the diseases that were most prevalent in the US slowly began to shift, and sometime between 1930-1940, the prevalence of infectious diseases was eclipsed by chronic diseases for the first time. Appreciation of the categorical difference between infectious and chronic diseases, however, did not follow until decades later, in the '50s and '60s. As researchers grew frustrated with their inability to discover the germ that causes heart disease, a new longitudinal epidemiological case-control study was started in the early 1950s, the Framingham Heart Disease study.

The Framingham Heart Disease study is important for our purposes here on two counts. First, it introduced a new framework for thinking about disease etiology. Where the germ theory of disease found impressive success in identifying one-to-one, cause-and-effect relationships between the agent of disease (e.g., the Plasmodium parasite) and the onset of a particular disease (e.g., malaria), the Framingham Heart Disease Study re-defined causality in terms of statistical probabilities, associated with the new concept of "risk factors," which, in this pioneering investigation, were identified as smoking, high blood pressure and cholesterol. With the advent and increasing dissemination of the Framingham study results, the "cause" of chronic diseases was no longer explained in terms of a deterministic one-to-one relationship. Instead, researchers explained that risk factors were *neither necessary nor sufficient* to cause a heart attack. That is, a person could smoke and not die of a heart attack, while another person could have a heart attack without ever having smoked. As we shall see, the probabilistic risk factor framework makes hard-and-fast distinctions between scientific and humanistic approaches to health promotion more complicated, where choices might be more fruitfully understood in terms of probabilities, not absolutely determined but not completely free either.

The second major reason that this study is important is because it shifted the focus of attention in health research from identifying the *agent* of disease to the *behaviors* of the host, the human organism (Neubrauer and Pratt, 1981). Following on the heels of Framingham, the 1964 Report by the US Surgeon General on *Smoking and Health* stated that smoking "causes" heart attacks–a controversial assertion at the time, as the classic criteria for defining cause-and-effect relationships were not met (such that the assertion of a causal relationship between smoking and heart disease is still challenged by the tobacco companies [Michaels and Monforton, 2005]). Still, the significance of behavioral risk factors thereafter became the primary target of interest among health researchers and public health professionals.

Building on such findings, the 1979 *Healthy People* report, the first ten-year US national public health service planning document, announced that,

> A group of American experts developed a method for assessing the relative contributions of each of the elements to many health problems. Analysis in which the method was applied to the 10 leading causes of death in 1976 suggests that *perhaps as much as half of US mortality in 1976 was due to unhealthy behavior or lifestyle*; 20 percent to environmental factors; 20 percent to human biological factors; and only 10 percent to inadequacies in health care. [emphasis added]

To dispel any lingering confusions conveyed by reports on the "leading *causes* of morbidity and mortality," where heart disease, cancer and stroke regularly topped the lists, Dr. J. Michael McGinnis, MD, the Deputy Assistant Secretary for Health Promotion and Disease Prevention, and Dr. William H. Foege, MD, a former Director of the Centers for Disease Control and Prevention, published a report in 1993 in the *Journal of the American Medical Association*, cleverly titled, the "*Actual* Causes of Death in the United States." In their report, they confirmed that more than half of all deaths in the US were caused by behaviors, starting with smoking (400,000 deaths), poor diet and physical inactivity (300,000 deaths) and alcohol use (100,000 deaths). This report was replicated in a study by Mokdad, *et al*, in 2000, with virtually identical results. The central role of behaviors was re-affirmed in a 2014 report by Bauer and colleagues at the CDC, where they state, "The chronic disease burden in the USA largely results from a short list of risk factors—including tobacco use, poor diet and physical inactivity (both strongly associated with obesity), excessive alcohol consumption, uncontrolled high blood pressure, and hyperlipidaemia."

Finally, it would be remiss not to mention that considerable attention is being paid to the role of the social determinants of health (SDoH; see Table 1.3) to explain health outcomes these days (Marmot and Wilkinson, 1999; Wilkinson and Marmot, 2003). While the shift in attention from individual behaviors to the social determinants might initially seem welcome, I have two reservations. One, most SDoH proponents still rely on a physicalist definition of health. They advocate changes in the social structure, but those changes are recommended in order to reduce the number of heart attacks, not to strengthen autonomy or gain clarity about values that matter. This is shortsighted and self-defeating, as I hope readers will appreciate by the end of this book. Two, many advocates of the SDoH framework appear to have implicitly adopted a scientific behaviorist model, to the extent that they aim to modify positive/negative environmental reinforcement contingencies to effect the desired changes in behavior. For example, large numbers of proponents advocate raising taxes on soda pop to raise the costs (negative reinforcements) of choosing to drink sugary beverages (see Chapter 6 for a full discussion). In this case, proponents seem to have embraced behaviorist principles, perhaps unwittingly but nevertheless, in seeking to alter reinforcement contingencies, while discounting the significance of new restrictions on autonomy designed, in this case, to reduce obesity rates. Along these same lines, I am troubled by the term, "determinants," which seems too strong a word, essentially denying the potential for human agency. As I will show, Anthony Giddens's (1976) "agency-structure" framework better captures the tensions between the

constraints imposed by the social structure and the capacity of agents to act to change the social structure.

Table 1.3: Social Determinants of Health
• poverty • racism • deficient education • unemployment • substandard housing • stressful neighborhoods with high crime rates and few public amenities • inequalities in wealth and status • stigmatization • lack of access to healthy foods, medical care and recreational areas • lack of transportation

The question addressed in this book is whether the evident role of behaviors in contributing to premature death, disease and disability today raises any distinct epistemological or ethical concerns in thinking about their prevention.

Why the Scientific Method Has Displaced Other Modes of Inquiry

The development of modern medical science closely tracks developments in the broader field of scientific research in general. In reviewing these parallel histories, I want to call attention to the slow pace of change in overturning the extant dominant paradigms of the day. Hippocrates's views on medicine prevailed for more than twenty centuries. The germ theory of disease emerges in the late 1880s and continues intact until the early 1960s. The central role of behaviors surfaces in the 1960s and it is only now, some 50-60 years later, that it is being challenged by growing interest in the social determinants of health. Similarly, this section reviews how the origins of the modern scientific method arise in the 16th century, yet secures philosophical warrant only in the 1930s, in the philosophical school of thought known as positivism. Allegations of the inappropriate and pernicious effects of applying the scientific method to study the human condition then surface in raging academic debates about the respective merits of quantitative versus qualitative research in the 1970s and '80s. These debates have quieted down to an extent in recent years, with an

uneasy truce ostensibly signaled by more frequent calls for "mixed methods" among researchers with a positivist bent. Yet, at the same time, one sees signs of unremitting disenchantment in increasingly common reference to an ideology of "scientism" by philosophers and social scientists reflecting on the challenges of understanding the human condition. For my part, I think current controversies are indicative of a period of intellectual transition, which are typically slow-moving, as a review of historical challenges to the dominant paradigm of the day suggests.

The origins of the scientific method date back to the Age of the Enlightenment, notably in the works of Newton, Bacon, Galileo and Descartes. The scientific method is fundamentally empirical, and drawing on repeated observations, it seeks to discover causal laws to explain what has been observed. Such laws are often expressed as mathematical equations, such as $E=mc^2$, and from such equations, scientists make predictions about the effects of changes among the identified variables, predictions that are used to confirm or falsify the law itself. Laws are particularly prized for revealing the underlying dynamics that account for a diverse range of phenomena, like the identity of forces that explain apples falling and planets orbiting, and for their parsimony (their elegance in simplicity) and generalizability. Laws are considered universal and unchanging over time and space (see Table 1.4 below). Examples of such laws are Newton's universal law of gravitation and his three laws of motion, Kepler's three laws of planetary motion, Kelvin's laws of thermodynamics, Mendel's laws of genetic inheritance, Avagadro's law on the number of molecules in gases in closed containers, Dalton's Law of partial pressures, Ohm's Law, Coulomb's Law, and others (see Carroll, 2016, among many

Table 1.4: Key Characteristics of a Positivist Science

- **Empirical:** it relies on human powers of observation and sense-perception (sight, hearing, touch, smell and taste)
- **Verifiable:** where validity is equated with the power to predict and control; *If-then* hypotheses
- **Replicable:** where successful replication requires fidelity in reproducing the exact same methods used in confirming the original hypothesis
- **Generalizable:** where the results are not only applicable to the particular case at hand, but apply across the whole class or category of subjects, e.g., human beings as the class that includes both women and men, people of all races/ethnicities, people of all ages, etc.

sources). When laws are verified, they enable scientists to make highly accurate predictions about the effects of changes in any of the variables stated in the equation. The knowledge associated with such laws provides scientists with the power and ability to produce a desired result. Because laws are tested and verified by predicting the effects of a change in the "independent" variable(s) on the "dependent" variable in the equation, after verification, the application of these laws to effect desired changes by practitioners outside the laboratory is exactly the same as the researcher's, an identity of methods now known as fidelity in implementation. (See Chapter 2, for further discussion.) Down through the ages, applications of the scientific method were used by Robert Koch in the late 19th century, and later, provided the basic hypothesis-testing foundation for the first randomized controlled trial in medical research in 1948.

Pressure to accept the scientific method as *the* authoritative and exclusive source of all human knowledge is widely attributed to the rise of a philosophy of science known as positivism. One pivotal text propounding the tenets of positivism is A. J. Ayer's *Language, Truth and Logic*, published in 1936 (see also, Popper, 1959). Although the positivist school of thought has come under withering attack in philosophical circles for many years, in practice, this empirical, hypothesis-testing methodology now informs virtually all research supported by the US National Institutes of Health (see Table 1.3). To determine whether anti-retroviral (ARV) medications can control the course of HIV infection, medical scientists conduct double-blinded RCTs. In this line of thinking, the validity of evidence collected in different research designs can be rank-ordered to establish a lexical hierarchy of knowledge (see Table 7.1 in Chapter 7). In this hierarchy, the number of potential confounders or threats to the validity of the results are reduced at each step up the ladder, providing greater and greater confidence that results more accurately represent the true reality of the relationship between the hypothesized cause and the resulting effect. In medicine, this hierarchy was codified in the publication "Evidence-Based Medicine" issued in 1992. One key purpose of this publication was to put physicians on notice about the wide variations in practice observed in treating patients, intimating that they were clinging to an outmoded anachronistic belief in the "art" of medicine. They need(ed) to adopt a scientific evidence-based approach instead. These same standards have been adopted by the US Preventative Services Task Force in their authoritative reports on effective prevention measures. Following in medicine's footsteps, Brownson and colleagues advocated the need for public health to adopt the same evidence-based standards in 2009. These

days, the need to implement only evidence-based interventions is almost invariably referenced in grant announcements supported by taxpayer dollars.

To summarize, current research and practice in health promotion are based on the assumption that there is no essential difference between the human condition and the natural world, where the laws of physics govern cause-and-effect relationships. Under the assumptions of the natural science paradigm, human behavior is caused by independent antecedent variables, which determine behavior and make people act in predictable ways. Behavioral health research is thus directed towards verifying cause-and-effect relationships. Researchers test hypotheses in experimental research designs, to confirm the hypothesized relationship between the independent variable(s) and the dependent variable of interest, a specified health behavior. Under this assumption, researchers use the exact same research designs and methods used to test the efficacy of new medications to treat HIV/AIDS, hypertension, or cancer as they use to determine the effectiveness of behavioral interventions aimed at reducing smoking or obesity.

To underscore the point, one of the most appealing features of the scientific method is that the process of verifying a hypothesis provides the very means for effecting a desired outcome. It provides the power to control events in the natural world. Based on Koch's postulates, we hypothesize that exposure to the tubercle bacillus will cause the person to contract tuberculosis (and not some other disease). If we introduce the microorganism into a healthy organism, we can then observe if it causes the specific disease in question or not. We hypothesize that streptomycin can kill the tubercle bacillus. We conduct an experiment by administering streptomycin and observing the result. If the course of the tuberculosis infection is stopped, our hypothesis is verified, thus providing the highest level of confidence known to humankind that we have discovered the truth about the nature and relationship of these events. In an amazing stroke of good fortune, we also come to learn that administering streptomycin is an extraordinarily effective way to treat tuberculosis; the patient can be cured, as long as one methodically follows the same procedures.

Lest I be misunderstood, I want to be clear: I fully accept, appreciate and am deeply grateful for the power of science to control events in the natural world, such as treating patients with HIV or tuberculosis. My quarrel is with the application of this same methodology to seek to control human behavior–to stop people from smoking, getting drunk or high, to effectively control people's weight, to make everyone get at least 45 minutes of aerobic exercise three times each week, to compel men to always wear condoms, and so on. There can be little doubt that the search for ever

more effective behavioral interventions is precisely the direction that the field of health promotion is now headed. If this approach had demonstrated greater success over the last 50-60 years, then I would need reconsider my assumption that human beings have the capacity for free will. But I see little evidence that this approach is working; we still do not know how to make people lose weight, get more exercise, stop smoking, avoid opioid abuse, and so on (Michie, *et al*, 2018). Ironically, to the extent that decades of concerted, well-funded, sustained health behavior research have failed to demonstrate otherwise, this turn-of-events lends support to my contention that human beings can and do make choices that are not pre-determined by causal antecedents.

The Distinct Aims of the Humanities

One starting point for appreciating the need for a humanistic approach to health promotion is to ask what is missing from the empirical scientific view. The answer is everything that makes human beings distinctively human: free will, agency, autonomy, values, volition, creatures with the capacity for morality. What is missing is the contents of subjective consciousness. Why? Because we cannot see (or in any other way empirically observe) what people are thinking. But what then are we to make of this? Because there is no objective independent third-party position from which to observe thoughts and feelings, empirical scientists treat them as outside the scope of scientific inquiry, and thus lacking in trustworthiness or credibility. If one cannot measure something empirically and objectively, then scientifically, it is not something about which any claims regarding truth or validity can be verified. If the felt experience of making a decision is not part of objective reality, then positivists maintain that it is fruitless to discuss or debate its effect as there are no means to test and confirm the truth of any such assertions.

The quandaries posed by this doctrine have not passed unnoticed by health researchers. One relatively recent concern in medicine that captures the dilemmas here is the issue of symptoms, or "Patient Reported Outcomes" (PROs). (In medicine, symptoms stand in contrast to signs, which refer to objective, independent evidence of disease [e.g., temperature, blood pressure, tumor scans, etc.]) PROs refer to a broad category of patient experiences, such as pain, fatigue, depression, nausea, dyspnea (shortness of breath), perceived quality of life, anxiety, cachexia/anorexia, confusion, discomfort from constipation, intensity of hot flashes, hunger, thirst, etc. (The NIH database, Patient Reported Outcomes Measurement Information System [PROMIS] covers 70 different domains.) However common they

may be, self-reports on such matters are viewed as decidedly, categorically unreliable (see, for example, Ferriera, Ferriera, Maher, Refsauge and Latimer, 2002, on the lack of agreement using different measures). Without the equivalent of a thermometer to measure a patient's temperature, how do we know whether the pain you claim to suffer is really as bad as you say it is, or whether it is more or less severe than the pain other patients say they feel? How do we square self-reports with the desiderata of unbiased, objective, empirical data? How much confidence do we have that they accurately represent reality? What is the basis for claiming confidence in their veracity?

We need the humanities to access the contents of subjective consciousness. The humanities are concerned with that which distinguishes the human condition. The tripartite division of the modern university is based on the recognition that the two pillars of human knowledge are the sciences and the humanities, reflecting human interest in both objective and subjective realities. (I come back to the purpose of the social sciences below.) Can you feel (see, or touch) someone else's pain? Can you measure justice? Are values, such as autonomy, equality, compassion, beneficence, generosity, or freedom, real? If science cannot measure and quantify values objectively, then how should we think about them? Does it mean they do not exist, are not real, and have no impact on human conduct?

Questions about the ontological status of values are critical for many reasons. For starters, the dismissive attitude of the sciences towards questions about the reality of human values erodes trust and confidence in their stature and place in human affairs. If they cannot be observed or otherwise measured directly, then empirical scientists are left only with what they consider problematic unreliable self-reports. From a scientific perspective, due to the lack of objective measures and consequent reliance on self-reports, values have come to be equated with individual desires. From this standpoint, there are no valid and reliable methods to calculate which desires are more important, have higher priority, or carry greater weight. Thus, short of the certainty and conviction that science provides, we have fallen into the trap of thinking that the only intelligible thing that can then be said about values is, different strokes for different folks. You have your opinion, I have mine, and that is all there is to say about the matter. I like drinking beer, you like fighting for social justice, but who is to say which is more worthwhile? How can one really know? As the press of science consigns values to an ambiguous netherworld presumed to be lacking substance and *ipso facto* causal consequence, the hegemony of the sciences in the modern world thus undermines the position that we can talk intelligibly about objective values. Another consequence of the high regard