

# **The Moment of Truth: An Analysis of the Physician/Client Interaction and Interpretation of Test Results**

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The relationships between health, the scientific approach in medicine and concepts of epidemiology underlie theoretical and cultural attitudes of the nature of behavior and health risks. Medical tests that diagnose risk factors are thought to be predictive of disease. Physicians employ these tests to more accurately assess the health of their patients and convince their charges to change their behaviors. Communication of newly described risk factors is challenging for both physicians and patients as each party negotiates modifications of behavior and perceptions of reality.

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“Yet there are people who strictly deprive themselves of each and every eatable, drinkable and smokable which has in any way acquired a shady reputation. They pay this price for health. And health is all they get for it. How strange it is! It is like paying out your whole fortune for a cow that has gone dry.” Mark Twain (1959)

## **INTRODUCTION**

In Western post-industrial society, the pursuit of health has become quite fashionable. Guided by medical science and socially sanctioned practice, future good or bad health can now be ‘determined’ by tests. There are tests to determine the health of unborn babies, tests to reveal infectious diseases, tests to reveal acute health disorders, tests to predict the onset of debilitating age-associated diseases, and tests to judge whether or not a person is at risk for chronic health problems. Though most of the tests are based on sound, replicable science, the interpretation and understanding of test results by the physician and the patient are highly variable and subject to bias on the part of both interlocuters. The interpretation of a test result by a physician to a patient is an especially knotty problem when risk factors for chronic diseases are being assessed. Furthermore, the act of interpretation is embedded in a larger sociocultural framework, which is manifest in both physician and patient. Given that the physician intends to use the test results to encourage changes in health behavior on the part of the patient, it is important to

deconstruct the interaction of the two participants and try to understand the effects on motivating changes in behavior.

### HEALTH, THE SCIENTIFIC APPROACH AND THE NATURE OF EPIDEMIOLOGY

The primary goal of a physician is to ensure the greatest possible health of the individual patient. "Greatest possible health" is often glossed as *perfect* health, an interpretation which, in light of the epidemiological nature of medical science, reveals a bias of innumeracy on the part of the physician. That is to say, while the scientific data (i.e. test result) upon which the physician is basing a diagnosis derives from theoretically normal distributions of health statistics, good health comes to be descriptive solely of the 'beneficial' characteristics in the upper end of the distribution (or lower, depending on the test). This renunciation of normality as mediocrity stems from a cultural warping of the original scientific definition of risk and is particularly relevant to the discussion of medical tests and their interpretation. In medical parlance, for an individual's test data to reside anywhere other than the healthy tail of the distribution is to put one "at risk" for whatever bodily condition a test statistic is thought to predict. A health risk, then, has a negative connotation. This is a culturally significant modification of a more traditional definition of risk, which is limited to the probability of occurrence of any particular outcome.

### CULTURAL ASPECTS OF RISK

That the concept of risk in medicine is associated with negative outcomes is not unexpected: Physicians do not seek to predict good health, they are concerned with predicting the occurrence of disease in an individual. The identification of various risks, or risk factors, correlated with a particular disease allows physicians to render a prediction about the appearance of the disease. Often, physicians use several tests that measure different medically significant variables associated with a disease in order to synthesize a prognosis based on a combination of several risks. Such a prognosis based on the theoretical and cumulative impact of multiple, related risk factors is inherently fluid and subject to review. This is especially true of chronic diseases, processes that are defined by risk factors and yield gradual morbidity over the long-term. For example, coronary artery disease can be clinically assessed by the presence of several of many risk factors, including high serum cholesterol, a family history of heart disease, smoking, alcohol use, stress, and obesity. Not all of the risk factors are necessarily associated in

every person with coronary artery disease, but there is a close correlation between combinations of risk factors and the manifestation of heart disease, that is, minor or catastrophic ischemia.

Risk factors become tightly cognitively linked to a particular disease, and this cognitive and appropriately correlative relationship quickly becomes associated with causation. From this interpretive juncture, it is a small step to identify risk factors with risk behaviors. That is to say, it can then be argued that different behaviors *determine* differential morbidity. From an epidemiological standpoint, this is a logically inappropriate leap, because in a population, on average, everyone pursues similar behaviors. Therefore those who 'come down' with a chronic disease must be somehow more susceptible (Rose 1985)—a proposition highly relevant to a discussion of individual responsibility and risky behaviors. Regardless of logic, risk has become publicly identified with certain behaviors that have taken on culturally loaded meanings. Douglas (Douglas 1990) argues that this construction of a culturally biased reinterpretation of the scientific (here, medical) notion of risk is that of responsibility. She asserts that the social usefulness of risk is not that it may be used to predict, but to inculcate. Such a forensic aspect of risk contradicts the intention of the physician, and smacks of social eugenics. This forensic mien of risk is a result of a transformation of a disease risk factor into the disease itself. Once a risk factor has been enshrined as an acknowledged causal factor for disease, it begins to take on a disease status of its own (Skolbekken 1995). To carry this argument further, risky behaviors can be established for risk factors *qua* diseases. The goal of the physician, then, becomes to improve the test results for risk factors either by prescription of prophylactic medication or by modifying behaviors that are associated with risk factors.

## TESTS

The physician is concerned with identifying and measuring risk factors for diseases by using various tests. At the most basic level, tests alert a physician to a problem. By comparing a particular test result to the normal range of results, the physician can render a judgment about an individual's health. As simple as this activity sounds, it is problematic. It ignores the issue of susceptibility (not everyone with high cholesterol has heart disease and dies of a heart attack), and often omits gender, ethnicity and age, to name just a few variables, from the diagnosis, inasmuch as there is often a lack of specific epidemiological data for these different categories. Moreover, the medical usefulness of tests is contingent on whether or not they are diagnostic or predictive, and whether they assay

for treatable or untreatable conditions. With so many variables and contingencies explicit in a single test, not to mention the complexities of incorporating a test into a diagnosis/prognosis, it is clear that the interpretation of the test on the part of the physician is crucial to the overall understanding of a patient's condition.

### **INTERPRETATION OF TESTS BETWEEN PHYSICIAN AND PATIENT**

Before the actual communicative act to discuss the test results occurs between the physician and patient, preconceptions have been formed by both parties that will affect any interpretation. The physician comes to the table rich with Western scientific medical lore and clothed in the raiment of rightness. The patient may come prepared to accept the authority of the physician, or is perhaps knowledgeable in folk epidemiology and even skeptical of Western medical science. More personally, the patient is likely considering what impact, social and economic, the results might have on their life.

### **BIAS ON THE PART OF THE PHYSICIAN**

A common perception in Western society is that only the physician has access to real health knowledge. This may be related to the historically relevant reduction of infectious diseases. The public perception of medical science has become that it can cure any infectious disease, a belief that has been extended to chronic, more environmentally mediated diseases as well. Physicians, as sacerdotal administrators of scientific medical knowledge, have come to have real power with regard to the interpretation of health information. In a way, then, a physician describes medical reality by how she interprets a test. Epistemologically secure, the physician assumes that her job is to describe the impact of the test on the patient's health, that is, to reify a disease and the course of action needed to remedy the condition. The physician assumes, of course, that the patient will submit to the appropriate treatment—it is the only rational course of action (Kirmayer 1992).

A simple flow chart for a diagnosis is to administer a test, consider the results, and interpret the test to the patient along with prescribing the most efficient mechanism for regaining health. This procedure assumes that perfect health is paramount. It also neglects the fact that the physician often has several other factors weighing in the balance for testing, prognosis and treatment. In today's health market, doctors must keep an eye on the cost of health care, probability of payment for services (insurance or otherwise), as well as legal considerations. Socially constructed legal ramifications of health care require that the

physician keep in mind who to tell, when to tell and what to tell (Reilly 1995). Just as relevant to the patient's health is the fact that what the physician chooses what to test for, and her interpretation, privileges some health problems while masking others (Rapp 1988).

#### BIAS ON THE PART OF THE PATIENT

Perhaps the most significant factor biasing an individual towards or against the implications of a test is why the person is having it. Someone considering a test must do an emotional calculation of the relative importance of social vs. physical risks before consenting to a test. Here, it is especially important to differentiate between predictive and diagnostic tests for diseases or risk factors. Consider, for example, a genetic test assessing whether or not an individual has a high probability of ever being afflicted with Huntington's Disease (HD). Because of the severe mental debilitation and late onset that characterize this disease, many prospective carriers choose to be tested in order to use the information for family planning purposes. Other reasons for being tested include: to be reassured; to plan for the future; and for marital decisions (Tibben, et al. 1992). This disease highlights the social significance of testing for treatable vs. untreatable diseases.

HD is an autosomal dominant disorder—an individual with a parent who has HD has a fifty percent probability of being a carrier as well, and the grandchild of an afflicted individual then has a twenty-five percent probability of being a carrier. Currently the disease is incurable, and being identified as a carrier using a very accurate polymerase chain reaction (PCR) assay means there is a high probability of suffering the disease. There is no U.S. law requiring testing of children of afflicted patients. Because it is a heritable disease, it is a family disease and therefore the decision about being tested becomes a family issue. For example, what if the grandchild of an afflicted grandparent chooses to be tested when the parent does not know his carrier status, and furthermore, does not want to know? What of the social and economic issues that result from being identified as a carrier? What of the social stigma associated with dementia? Though there is not necessarily much interpretation involved on the part of a physician with a test for HD, it is important for the physician to refer the patient for counseling. For such an untreatable disease as HD the physical risk of a predictive test is negligible; it is either unavailable or unavoidable (though HD manifests to different degrees in different affected individuals), but the social risks are significant.

Other more chronic diseases, such as heart disease, though not as acutely debilitating or stigmatized as HD also involve weighing both

social and physical risks prior to deciding on a course of action. For example, being identified as suffering from hypercholesterolemia (a risk factor for heart disease) carries the social risk of being encouraged to change certain dietary and physical behaviors. While this may seem unrelated to a social risk, public knowledge of the condition embodied by practicing "heart-smart" behaviors does affect how an individual is perceived. This is especially significant at work, where easing up and decreasing stress may be perceived as being miserly with health capital (*à la* Bourdieu (Williams 1995)) or somehow not doing one's best to perform. On the other hand, one may be stigmatized by being observed to practice behaviors thought to exacerbate the condition. The embodiment of social risks is an intriguing phenomenon not necessarily dependent on, but certainly enhanced by, coming psychologically face to face with one's own mortality. More generally, this appears to be a fear of changing behavioral relationships and abilities. If we are socially defined by what we do, then health-mandated modifications in behavior vary who we are, socially. To some extent, medical science can alleviate the physical risks of hypercholesterolemia (an environmentally mediated genetic condition)—with angioplasty or drugs inhibiting the synthesis of cholesterol—but the issues of social risk remain.

### *FOLK EPIDEMIOLOGY*

All people have had experience with disease and health disorders both personally and through the observation of others' experiences. The totality of these cases of illness constitute a historical basis, a folk epidemiology, with which to evaluate their own health concerns (Davison, et al. 1992). At a macro level, this folk epidemiology is incorporated into cultural ideas about the incidence and causes of disease. Davison et al. (1992) report a public perception that health issues are due to chance. This perception is opposed by the public culture of personal freedom and responsibility found in the United States. Both of these ideas about etiology lie at ends of the health belief spectrum; most individuals are probably middle-of-the-road fatalists acknowledging the effects, salubrious or deleterious, of particular behaviors and habits on health. Possibly this perception of chance is due to observations that people who follow such a healthy lifestyle that they should not get sick, do—the 'when bad things happen to good people' scenario (Davison, et al. 1992). This can generate cognitive tension and even behavioral immobilization.

Folk epidemiology also encompasses the public interpretation of previous health findings of the medical establishment. The health advice that doctors and the mass media offer can stimulate new ideas about

illness, and even trigger novel behavior. Its contradictory and often sequential nature, however, can result in disbelief and skepticism among the medically literate public (Becker 1986). Another issue is the general misperception and misinterpretation of the relationship between probability and disease. It is difficult for people, and many scientists for that matter, to grasp the multifactorial nature of chronic, debilitating diseases. Unclear ideas about probability cause people to tend to overestimate the likelihood of horrible events with low probability and underestimate the likelihood, or more appropriately the impact, of reasonably probable events. Take, for example, the behavior of an individual who drives, without a seatbelt, to the local supermarket to purchase a lottery ticket for a chance at a few million dollars. There is a significantly higher probability, on the order of several magnitudes, that the person will be in a life-threatening automobile accident than that they will win the lottery. This same folk logic carries over into health, where there is a tendency to try to eliminate a rather small risk (like testing for a rare kind of heritable disease) rather than mitigate a large risk (such as a modifying and pursuing a 'healthy' lifestyle) (Lerman and Croyle 1995).

#### *OTHER SOURCES OF PATIENT BIAS*

Just as with scientific epidemiology, when considering folk epidemiology it is critical not to lump the beliefs of all individuals into one gender-free, a-cultural or an-economic mélange. Depending on one's gender, for example, a patient may have different ideas about health and responsibility. One study on genetic disease in the Netherlands found that

"Female test candidates tended to turn their unacceptable feelings against themselves and had the opinion that health and future prospects depended on themselves, whereas males turned their unacceptable feelings to the outer world and tended to base their health and future prospects on chance." (Tibben, et al. 1993, p.104)

Given the wide ethnic variation in the United States, especially in urban areas, there is a broad experience of folk epidemiology. How much does folk epidemiology vary from household to household? How does it change among recent immigrants from generation to generation as individuals tend to assimilate and adopt more conventional cultural values? To what extent is folk epidemiology or ideas about health modified by socioeconomic status? What role does mass media play in amending a folk epidemiology?<sup>1</sup> Clearly, a patient comes to the

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<sup>1</sup> Here, I am reminded of a recent television commercial for a pain-reliever in which a 'normal' individual is commenting that he intentionally discounts the claims and even

physician's office with a complex pattern of conscious and unconscious biases and convictions.

### THE (ALMOST) DIALECTICAL ACT OF INTERPRETATION

In its grossest aspect the interpretation of test results and concomitant risk is an explication couched in medical discourse. It is the physician's duty to convey the test results and the implications for health in a clear and meaningful manner. In order to do this, the physician must have knowledge of the individual's past medical history and behavior. The kind of knowledge expected for appropriate interpretation can vary according to the kind of test. For interpreting a genetic test, like HD, the physician takes a complete family history of health. The motivation for gathering this information seems innocent enough, but given the social history in the United States and the (more recent than we would care to recall) pathological concern with 'defective individuals', one is reminded of Charles Davenport and the activities of the Eugenics Record Office (Kevles 1985). For interpreting the test of a specific, continuous variable such as serum cholesterol, the physician needs information regarding certain behaviors that have been clinically identified as risky with regard to high serum cholesterol values. To ascertain a behavioral pattern that might be related to the test score, the physician asks the patient about these explicit risky behaviors, and whether or not they are part of a normal behavior repertoire. If we return briefly to the earlier argument concerning population and susceptibility, the motivation becomes apparent. With a pathological condition (here, a test result) determined to be the result of susceptibility to disease, and risk factors capable of *being* diseases, it is logical for the physician to ferret out the cause of the problem as a behavior. The physician is asking the patient to communicate information about a particular lifestyle. From a strictly processual point of view, a lifestyle is a broad mosaic of behaviors performed within the context of work and leisure. For each individual there is a range of behaviors available within their particular social and economic milieu. How accurately can the patient communicate lifestyle information and how does the physician incorporate this information into a diagnosis?

### COMMUNICATING LIFESTYLE

Bourdieu argues that these behaviors are, quite literally and unconsciously, embodied (Williams 1995). Because they are

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validity of clinical studies, and relies on his own experience with different headache palliatives in order to choose the most efficacious medication.

unconsciously embodied, an individual is unable to clearly verbalize these behaviors to a physician. While a person is potentially aware of *what* behaviors they do perform, from their personal perspective it is not possible for them to know *why* they perform a given behavior (*à la* Bourdieu's *habitus*). That is not to say that the patient can not be cognitively aware of particular behaviors, and indeed, with perspicacious goading on the part of the physician, specific behaviors can be brought to the fore. Furthermore, the patient, seeking to offer the most medically relevant behavior, will often mention certain behaviors that best agree with their personal folk epidemiology while ignoring others. It is interesting to note that patients generally become better at framing their responses to a medical inquisition; the more they participate in medical discourses the more fluent they become with the language and what is an appropriate response. It follows, then, that any behavioral data gained by investigative questioning on the part of the physician will "not only be misplaced but liable to (re)produce a misleading picture" (Williams 1995, p.583). In addition, this epistemological quandary is further complicated by expectation, related to the test result, on the part of the physician. The physician expects the patient to present with specific behaviors, such that expected behaviors are privileged while unanticipated or uncommon behaviors are dismissed as irrelevant. There might also be a tendency on the part of the physician to take metaphoric explanations of illness by the patient as literal statements (Kirmayer 1992). An example of this may be how and where a patient ascribes the origin of pain. Conversely, it could be that a particular, risky behavior *qua* metaphor *cum* disease comes to symbolize an entire suite of behaviors culturally associated with a test. By the same token, a particular behavior like smoking, for example, can transmogrify into a metaphor symbolic of a whole lifestyle. In the end, the physician may ignore the lifestyle information, intuitively knowing that the data has been phenomenologically doctored. Thus, knowledge of a patient by a physician is limited to a scant mosaic of test scores and past health issues; rarely is there an attempt to place a patient and her health within the context of work and leisure.

#### *TEST RESULTS AS TOKENS WITH SOCIAL SIGNIFICANCE*

The moment arrives for the physician to actually convey the test information to the patient. What are the hermeneutical considerations of this meeting of minds? At the crudest level of analysis, the physician frames the argument according to assumptions about the test and the patient, while the patient works to incorporate (or not) the results into their personal *weltanschauung*. It is at this juncture that a *syncretic*

discourse emerges. This appropriately bivalent discourse constitutes an orogeny of clashing biases, ideas and attitudes about health and society. The discourse truly becomes a negotiation, an adventure in compromise—or does it?

While it is true that both the physician and patient come to the field of discourse with their own ideas about health, society generally privileges the knowledge of the physician over the patient's. This socially determined elevated level of legitimacy of the medical establishment has not always been the case, and it is in some debate as to whether it is still the case, but the mid-20<sup>th</sup> century social construction of health has privileged medical science first and foremost (Illich 1986). While the particular acquisition of scientific knowledge may be herded by cultural values it is still a replicable, testable representation of reality. This view of science as iterations generally holds true for genetic tests (e.g. PCR for HD), but leaves something to be desired with the interpretations of multifactorial assessments of risk factors for chronic diseases. As I argued earlier, somewhat facetiously, physicians are the sacerdotal administrators of scientific medical knowledge, and during the interpretive act are generating an interpretation of the biostatistical significance of relative risk factors for an individual. Were this all that the physician was doing, that would be one thing, but the physician is not only the mouthpiece of medicine: The physician serves society and promotes social values of health.

This act of stewardship on the part of the physician is unconscious and integrally linked to her "lifestyle" as physician. In other words, just as the patient was unaware of the *why* of his behavior and the extent of the *what* so too is the physician oblivious. The potential for social change revolves around the ability of the physician to instigate changes in the behavior of the patient at-risk for a disease. It is at the interpretive juncture that the interests of the physician, who is fixated on the risk factor as disease, and those of the patient, who tends to focus on social sequelae, that changes can be effected. It is at the interpretive juncture, during which the test results are veiled in uncertainty, that the physician is able to skew ideas about disease and thus susceptibility. This latitude of interpretation derives from a combination of the meaning of *risk* and the primary goal of the medical profession—mystical perfect health. More specifically, how does the physician convey risk to the patient and when?

The physician, as a member of the medical establishment, is a proxy for this institution of social control (Sachs 1995). This cultural framework shapes her biases and perception of the patient and how she portrays the significance of the results for the patient. A recent study

examined just how medical personnel reported test results for heart disease to patients (Adelswärd and Sachs 1996). The investigators highlighted the subjectiveness with which the personnel seemed to frame the results. Some patients were massively at risk for the risk factor hypercholesterolemia, and the personnel duly interpreted the results as such. But, interestingly, they also declared, biased apparently by perceived lifestyle (i.e. behaviors as quickly gleaned from observations of bodily hexis), patients to be at risk when they were below the epidemiologically significant cut-off value. It is as if being at risk for being at risk for the risk factor is a disease. The personnel are thus influencing ideas about disease and susceptibility, and more importantly implying locus of responsibility.

### *WHOSE IS THE RESPONSIBILITY OF HEALTH?*

Culturally, there has been a shift of the locus of responsibility for disease as being outside of individual control to being the liability of each individual. This is partially due to the historical shift, an epidemiological transition, from acute, infectious diseases to chronic, multi-factorial diseases. In this way, by 'conquering' most infectious diseases, medical science has established itself as the preeminent arbiter of health. But what about chronic diseases? It seems that medical science, as a result of its inability to provide cures for chronic diseases, abdicates its responsibility and places it elsewhere. Notwithstanding the scientific aspects of medicine, health and disease are also products of social construction on a macro level, and can be subject to ideological manipulation.

Perhaps the most striking feature of this process has been the development of a strong, officially-sponsored ideological perspective which emphasises the personal responsibility of the individual citizen in the maintenance of their own health and the avoidance of chronic disease (Davison, et al. 1992, p.675).

It is not within the scope of this paper to examine the theoretical underpinnings of this phenomenon, but it is possible to articulate some of the mechanisms placing responsibility at the feet of a patient.

Previously, I made a case for the phenomenological links between risks, risky behavior, lifestyle and health. The ideology of individual responsibility operates in reverse order. The postulate of the ideology assumes that an individual has direct control over his behavior *qua* lifestyle. On the one hand, then, an unhealthy lifestyle will cause chronic disease, while on the other, a healthy lifestyle will prevent chronic disease or cure it (Sachs 1995). Promoting responsibility on the part of the patient by the physician becomes a form of psychological social

control, because “susceptibility to at-risk behaviors, if not a moral failing, is at least a psychological failing (Crawford 1977). The physician is, then, expected to shame the patient into appropriate behavior. Recalling that many patients are convinced that susceptibility to disease is the result of chance, when society argues for individual responsibility a substantial conundrum arises. The conundrum revolves around the issue of agency. Does the individual really have any *conscious* control over which behaviors she practices?

The ideology of the individual forces a view of an individual independent of socioeconomic status (SES) (Crawford 1977). This is highly misleading, because there are prominent relationships between disease, SES and lifestyle. Crawford (1977) holds that:

by pointing to life-styles, which are usually presented as if they reflect the problems of a homogenized, affluent society, this aspect of the ideology tends to obscure the reality of class and the impact of social inequality on health (p.672).

Generally, with decreasing income there is increasing morbidity. Beyond the epidemiological relationships, there are social associations between the three. Bourdieu argues that class-specific behaviors and public practice of them buttress the borders of both the lifestyles and the social groups (Williams 1995). Different health disorders are perceived differently in the Public’s eye with regard to responsibility (Davison, et al. 1992). Different health disorders are the domain of different social groups. Different health disorders are caused by differentially by different lifestyles. Different lifestyles are part and parcel of belonging to different classes. The historically fluid nature of class and the opportunities ideologically afforded for life (health), liberty and the pursuit of happiness can easily lead to the social eugenics of health. To wit, “you are not sick because you are poor, you are poor because you are sick.” When one sees beyond the ideology of the individual and realizes the existence of a class structure, it becomes easier to understand the constraints on behavior that are placed by SES and the effects of lifestyle on health. It is significant to note that Bourdieu’s ideas about the restrictions on behavior by class support arguments against victim blaming (Williams 1995).

### THE IMPACT OF TEST INFORMATION ON BEHAVIOR

Even though behavioral modifications made early enough may be useful for alleviating the risk of chronic disease, it is difficult for people to change basic behaviors and habits. Why is that? Williams (1995) writes that:

Health-related behaviour can be seen as a largely routinised feature of everyday life which is guided by a practical or implicit logic (p.583)

This (again) begs the question: Who has the agency? Is there room for individual agency within theories of socially driven, health-related behavior? I think that within the larger theoretical concepts of *habitus* and practical logic there is some room for individual agency; it is just that it is not reductively theorized. That is not to say that an individual operates in an agency vacuum—that only one agency is operating in the sphere (here) of health influence. In fact, in the dynamic interaction between physician and patient they are competing for agency. The discussion of agency and awareness of health-related behavior presents somewhat of a logical conundrum: If the patient is patently unaware of *why* and *what* her behaviors *are*, it might also not be possible to modify or eliminate unhealthy ones. It is the responsibility of the physician to highlight and bring to fore particular risky behaviors. As I argued previously, however, those risky behaviors are not based on behaviors of the patient that the physician is observing or assaying by interview. The physician posits behaviors that have been epidemiologically reified. With these reservations, what constraints are there on the physician to motivate personal changes in behavior? Perhaps more appropriately, what constraints are there on patients to motivate changes in behavior ?

The act of interpretation will have more of an impact on behavior if the patient is somehow primed for the behavioral suggestion *at that time* in their lives. People who are living at the edges of their SES or otherwise culturally or medically liminal pay more attention to health, and are thus more behaviorally malleable. The impact that differing perceptions of class-appropriate diseases has on an interpretation of a test result is significant, but even more important is the impact it has on the melding of the information with the patient's perception of what is socially suitable. Behavioral change will most likely occur if the proposed modifications are available within the lifestyle categories of the SES as a whole. The extent to which a physician's and patient's ideas about etiology match, then, plays a role in the effectiveness of the physicians advice:

New evidence appears reliable and informative if it is consistent with one's initial beliefs; contrary evidence is dismissed as unreliable, erroneous, unrepresentative" (Slovic 1986 p.405).

To some extent this paradox of etiology can be alleviated over time and with subsequent tests supporting the same prognosis. In this way the patient becomes accustomed to being at risk, and ultimately more amenable to the suggestion of behavioral modification.

## CONCLUSIONS

The relationships between health, the scientific approach and aspects of epidemiology underlie theoretical and, more importantly, cultural attitudes of the nature of behavior and health risks. Medical tests that diagnose risk factors are thought to be predictive of disease, and physicians employ these tests to more accurately assess the health of their patients, but, more importantly in the case of chronic diseases, to convince their charges to change their behavior. Purportedly, by modifying risky behaviors the risk for disease can be lessened. The prospect for reforming lifestyle in light of test results is first broached during the actual interpretation of the results on the part of the physician to the patient. Each participant in the discourse of interpretation comes to hermeneutic interface with certain biases. For the physician, there are biases related to epidemiological ways of thinking, the power of having knowledge to impart, and intuitive assessments of the patient's lifestyle. The patient comes with a folk epidemiology and cultural concepts of etiology, as well as being prepared to somehow incorporate (or not) the test results into their social outlook. In a way not quite understood, the patient must be prepared to take both physical and social risks into account when evaluating the test result. Concurrently, the discourse is rooted in a sociocultural horizon. Most significant to the interpretation is the problem of responsibility that springs from this horizon. At odds are the widespread cultural phenomenon of individual responsibility for health and the perceived randomness of disease events. All of these considerations play a role in determining whether or not the upshot of the accommodation of a test result into a personal belief system about disease will have any impact in terms of modifying health behaviors.

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