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SPECIAL ARTICLE

ARROGANCE*

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IN this George W. Gay Lecture, specifically designated as "upon medical ethics," I shall focus on three issues. The first, an example of intergroup tensions, deals with the common accusation that bioscientists are arrogant, i.e., that they are presumptuous and overweening in their attitudes, decisions, and goals; that they exhibit, in the fashionable noun of the day, hubris. I shall argue that the bioscientist may be arrogant, but no more so than any other group and perhaps just a little bit less so.

The second issue bears on the personal encounter between physician and patient: Is it marked by authoritarianism, paternalism, and domination? My answer is not only "yes" but also that a certain measure of these characteristics is essential to good medical care. In fact, if you agree that the physician's primary function is to make the patient feel better, a certain amount of authoritarianism, paternalism, and domination are the essence of the physician's effectiveness.

Thirdly, I shall maintain that many physicians are

indeed arrogant in their behavior toward patients, but in a way that is not even specifically identified by any of the dictionary definitions of the word "arrogance."

Although no learned vocation is exempt from the accusation, the professional group most often belabored for arrogance is that which uses advanced and complex technology in its thinking and doing. It is the scientist, whether in physics or in molecular biology, or even the parascientist in medicine, who is seen as making policy decisions motivated by self-interest and acting with a total disregard for broad human needs. Almost reflexly the hoary Clemenceauism is trotted out that war must be not left to the generals. Because of this societal apprehension, decision-making bodies are being created with the express purpose of limiting the influence of specifically those scientists who possess expertise relevant to the questions that must be answered. Physicians are well acquainted with the provisions of Public Law 93-641, enacted in 1974, which establishes a network of health-systems agencies. The majority of members appointed to bodies responsible for planning and implementing this system, such as area governing boards and sub-area councils, must consist of so-called consumers rather than providers of health care. The same principle is being applied to even more momentous issues, such as whether arbitrary limits should be placed on mankind's search for knowledge. Thus, many maintain that the current frenetic argument about further research in recombi-

*Based on the George W. Gay Lecture, delivered by Dr. Ingelfinger at Harvard Medical School on May 5, 1977, shortly before he retired as Editor of the *Journal*. Dr. Ingelfinger died on March 26, 1980, leaving his lecture notes still only partially edited. He evidently could not persuade himself that his lecture deserved publication and had allowed the unfinished manuscript to languish in his files until his death. However, a recent rereading convinced us that this was vintage Ingelfinger and therefore eminently worth presenting to our readers. With the permission of his family, we present an abridged and slightly edited version of Dr. Ingelfinger's remarks.

nant DNA should be resolved by groups in which the representatives of science are not only restricted but eliminated altogether.

Indisputable reasons exist why decisions affecting society as a whole should be made by persons broadly representative of that society and not by those who might be biased, perhaps by reasons of personal gain or by entirely honorable but nevertheless unbalanced and enthusiastic intellectual commitment to a discipline. Indeed, the principle is basic in most democratic societies. Whether in Britain or the United States, it is Parliament or Congress after all, that decides how much money should be spent on various programs of biomedical research and public health.

The justness of society's control is not the issue. Nor is it deniable that many specialists in the biosciences entertain a hemianoptic view of the world. It is understandable, furthermore, that the bulk of biomedical scientists and parascientists will as a group make decisions grossly influenced by their own skills and resources. Under many a circumstance the surgeon will cut when the internist will use antibiotics. My concern is that the words "arrogant scientist" imply that the ignorant, whether lay or professional, have no such faults. But the arrogance of ignorance can be as devastating as the arrogance of expertise. Yet the arrogance of ignorance or the arrogance of the anti-scientific or anti-intellectual activist is hardly ever mentioned, although it may be as flagrant as that of the most doctrinaire member of the conventional scientific establishment.

Let us start with an example of relatively low emotional intensity, that of diet. Over the years various dietary practices have been endorsed or condemned by physicians, and the popularity with the public of this or that dietary fad is an ancient but continuing phenomenon. For years doctors and public alike were convinced that the consumption of some foods aggravated or even caused peptic ulcers of the stomach or duodenum, or that other foods had salubrious effects. Harmful staples were identified as spicy, coarse, and strongly colored; those designated as beneficial were bland, smooth, and colorless. White protein such as chicken and fish was permissible, but red meats such as beef and lamb forbidden. One school of thought — indeed, both medical and nonmedical — exercised reductionism to its ultimate: the ulcer patient was simply told to eat a white diet. Farina, potatoes, and milk, I suppose, were intended, but I always wondered if the literal minded might not also include horse-radish.

The influence of superstition, mysticism, and religion on dietary beliefs is of course strong. In 1910, for example, a popular fad was Fletcherism, the practice of chewing each bite of food intensely — perhaps 30 times. The originator of the cult, Horace Fletcher, always wore white suits to emphasize the spiritual purity of his obsessive mastication. Perhaps similar occult powers enhance the appeal of the white diet in the treatment of peptic ulcer.

Nowadays we still know little about the cause and cure of peptic ulcer. Indeed, many excellent scientific studies employing the resources of modern technology have, on the one hand, increased knowledge about the nature of peptic ulcer but, on the other hand, increased the expert's recognition of how little he knows about the causes of this disorder. More knowledge has paradoxically highlighted non-knowledge. Correspondingly, the value of dietary regimens imposed, in retrospect with somewhat arbitrary ignorance, is questioned by the skepticism of scientific expertise.

Currently another dietary vogue is attracting the faithful: the overly refined, low-roughage foods of the industrialized West are said to cause diverticulosis and perhaps cancer of the large bowel, hemorrhoids, varicose veins, and calcifications of pelvic veins. Perhaps these processed foods are harmful, but the categorical endorsement of high-roughage diets impresses me as another example of an arbitrary, authoritarian pronouncement based on half-knowledge and on an unacknowledged ignorance of overall effects — in other words, somewhat arrogant. In 1952, long before Burkitt and others became interested in the effects of diet on the pathogenesis of colonic diverticula, a pathologist in Lima, Peru told me that at autopsy he could always differentiate the colon of the Spanish descendant from that of the Andean Indian. The Spanish descendant's colon, to be sure, might have diverticula, but the Indian's did not. On the other hand, the Indian characteristically had a very long colon, particularly a long and convoluted sigmoid. Because of this characteristic, Indians frequently suffered fatal volvulus of this organ. Albert Schweitzer recorded the huge prevalence of hernia in the patients he saw. So high-roughage diets may have their unfavorable as well as favorable consequences, but one would never know it from the denunciation one hears of low-roughage diets. I even suspect that mystic and moralistic forces are at work here, for obviously a high-roughage diet is a return to the natural conditions of the noble savage and the endurance of hardships, whereas the refined diet indicates an effete and self-indulgent luxury.

My dietary homilies are intended to illustrate the multifarious societal forces that underlie questionable policy decisions — in this case, policies about what to eat. The public, the doctor, the professor of physiology participated in decisions that were spun arbitrarily out of flimsy strands of evidence. Their reasoning depended on what Alvin Weinberg has called trans-science. "Many of the issues," Weinberg wrote in 1972,* "that arise from the interaction between science or technology and society . . . hang on the answers to questions that can be asked of science and yet *which cannot be answered by science*. I propose the term trans-scientific for these questions since, though they

*Weinberg AM. Science & trans-science. In: Civilization and science: in conflict or collaboration? a Ciba Foundation Symposium. Amsterdam. Elsevier Press, 1972:105-23.

may arise in or around science, and can be stated in the language of science, they are unanswerable by science — that is, they transcend science.”

Failure to differentiate between science and trans-science, failure to recognize that a regulation or recommendation may be concocted in a vacuum of knowledge is to my mind a manifestation of the arrogance of ignorance.

I must make a distinction here: I do not assert that conclusions reached in the absence of reliable fact are per se arrogant. Such conclusions unavoidably characterize politics, science, and medicine, especially when the need for action is urgent. Arrogance enters when those reaching various decisions in the absence of adequate data fail to recognize or to admit how empty their cupboard of information is. Superior scientists or doctors, I should like to believe, are always aware of how little they know. Doubt tempers arrogance, and for this reason perhaps some bioscientists might be credited with *sophrosyne* rather than condemned for its opposite, *hubris*. (I admit I never heard of *sophrosyne* before I prepared for this lecture, but it has all the prerequisites for becoming a stylish word.)

Sociologists, ethicists, and others like to speak disparagingly of what they call the doctor's authoritarianism, paternalism, or domination. Such a position, I submit, is unrealistic and untenable. The physician is a person to whom patients go because they need or think they need help. Let us assume that the physician they select is competent and compassionate. In spite of these virtues, there is usually little the physician can do physically, that is, by cutting or by a chemical manipulation, to eradicate the cause of the patient's distress. That is why epidemiologists keep pointing out — and the recent book by Thomas McKeown (*The Role of Medicine: Dream, Mirage, or Nemesis?*) is an outstanding example — that the physician's intervention has done little to prolong life or eliminate serious morbidity. The figure generally quoted — although it may be an arrogant figure in that the substantiating data are fragmentary — is that 90 per cent of the visits by patients to doctors are caused by conditions that are either self-limited or beyond the capabilities of medicine. In other words, if we assume that physicians do make patients feel better most of the time, it is chiefly because the physician can reassure the patient or give medication that is mildly palliative. Even an operation may once in a while make a patient feel better, although it does not prolong his life or eradicate the source of his problems.

If the physician is to be effective in alleviating the patient's complaints by such intangible means, it follows that the patient has to believe in the physician, that he has confidence in his advice and reassurance, and in his selection of a pill that is helpful (though not curative of the basic disorder). Intrinsic to such a belief is the patient's conviction that his physician not only can be trusted but also has some special knowl-

edge that the patient does not possess. He needs, if the treatment is to succeed, a physician whom he invests with authoritative experience and competence. He needs a physician from whom he will accept some domination. If I am going to give up eating eggs for the rest of my life, I must be convinced, as an ovo-phile, that a higher authority than I will influence my eating habits. I do not want to be in the position of a shopper at the Casbah who negotiates and haggles with the physician about what is best. I want to believe that my physician is acting under higher moral principles and intellectual powers than a used-car dealer.

I'll go further than that. A physician who merely spreads an array of vendibles in front of the patient and then says, "Go ahead and choose, it's your life," is guilty of shirking his duty, if not of malpractice. The physician, to be sure, should list the alternatives and describe their pros and cons but then, instead of asking the patient to make the choice, the physician should recommend a specific course of action. He must take the responsibility, not shift it onto the shoulders of the patient. The patient may then refuse the recommendation, which is perfectly acceptable, but the physician who would not use his training and experience to recommend the specific action to a patient — or in some cases frankly admit "I don't know" — does not warrant the somewhat tarnished but still distinguished title of doctor.

Although I have subscribed for some time to the principle that the physician must be authoritarian and paternalistic to some degree, my experience as a patient has substantiated that belief in the strongest way possible. If you will forgive me for being both anecdotal and personal, let me tell you how the lack of authoritarian decision brought agony to me and my family. About a year and a half ago it was discovered that I had an adenocarcinoma, a glandular cancer, sitting astride the gastroesophageal junction. Ironically, this had been an area of the gut to which I had paid much attention in my professional career as a clinical investigator and consultant; therefore, I can hardly imagine a more informed patient. The need for surgery was indisputable if I hoped to continue to be able to swallow. But after a successful operation my real dilemmas began. The surgeon had found no visible evidence that the cancer had spread. But this proved nothing, because cancers can spread to form tiny nests of cancer elsewhere — micrometastases. The current medical practice is to assume that a patient who has had an operation for any of a variety of cancers (including the type I had) should also be given prophylactic treatment in an effort to eradicate the micrometastases before they enlarge. For this purpose both chemotherapy and radiotherapy are being used extensively. So one question was: Should I have chemotherapy, with all its side effects? And if chemotherapy, what kind? Even more debatable was the question of whether I should have radiotherapy.

There is no generally acceptable evidence that residual nests of adenocarcinoma cells will respond. In addition, radiation would involve for me a number of complications, such as fibrosis of the lungs, and the possibility of a host of less frequent but nevertheless serious side effects. At that point I received from physician friends throughout the country a barrage of well-intentioned but contradictory advice. The question of prophylactic radiotherapy was particularly moot. As a result, not only I but my wife, my son and daughter-in-law (both doctors), and other family members became increasingly confused and emotionally distraught. Finally, when the pangs of indecision had become nearly intolerable, one wise physician friend said, "What you need is a doctor." He was telling me to forget the information I already had and the information I was receiving from many quarters, and to seek instead a person who would dominate, who would tell me what to do, who would in a paternalistic manner assume responsibility for my care. When that excellent advice was followed, my family and I sensed immediate and immense relief. The incapacity of enervating worry was dispelled, and I could return to my usual anxieties, such as deciding on the fate of manuscripts or giving lectures like this.

If arrogance in the sense of paternalism and dominance is an ingredient of beneficial medical care, these qualities have to be used appropriately. To the extent that paternalism and dominance are infected by some of the other meanings of arrogance, a physician's conduct with patients is correspondingly worsened. Thus, if his paternalism is accentuated by insolence, vanity, arbitrariness, or a lack of empathy, the care he attempts to provide his patients is nullified. In other words, a physician can be beneficially arrogant, or he can be destructively arrogant.

Physicians as a class, I suspect, are probably no more vain or insolent than any other people. Some are presumptuous and condescending, others self-effacing and sympathetic. Although arrogance in some of its more nefarious meanings — vanity, insolence, and ruthlessness, for example, — cannot, I believe, be identified as a general characteristic of the medical profession, the profession as a whole is affected by a brand of arrogance subsumed under lack of empathy. Doctors for various reasons find it difficult to put themselves in the patient's place; they do not sufficiently appreciate, or perhaps do not have the time to appreciate, how the patient feels and how he reacts to the medical information and procedures to which he is exposed.

The problem, discussed to some extent in the April, 1977 issue of the *Annals of Internal Medicine*, has two components — one intellectual and to some degree ameliorable, and the other emotional and requiring for its correction the utmost in medical art. The first component is simply a matter of language. The argot

of the physician has not only been ridiculed extensively but criticized as one of the devices used by the medical profession to maintain its mystique. This explanation may have held true in Molière's time, but I doubt its validity today. The profession's addiction to its vocational jargon is probably a matter of habit, difficult to dispel because of the physician's training, his incessant intercourse with other doctors, his reading of *The New England Journal of Medicine*, and his relative ineptitude with ordinary English. Whatever the reasons, physicians tend to use terms that laymen either do not understand or misinterpret. Even one of the best communicators with the public I know, Dr. Timothy Johnson, may on occasion allow the guests on his popular program, "House Call," to lapse into language more appropriate for the medical amphitheatre than the public forum. "Endometrial carcinoma" is much easier for the medical tongue than "cancer of the lining of the womb."

Many patients, to be sure, are acquainted with medical terms and use them, and it has been proposed that teaching the patient about medicine — enriching his vocabulary rather than profaning that of the doctor — might improve communication between the two parties. But do patients really understand medical words? We physicians certainly have problems with the principles and jargon of other skills, as is evident in the reproving letters I receive when we publish articles dealing with the arcane statistics or economics of medicine. Similarly, even if the patient uses words such as "myocardial infarction," does he really appreciate the spectrum of pathologic, diagnostic, prognostic, and therapeutic implications that this common expression conveys to the physician? All but the most medically sophisticated patients need to be informed, I suspect in nontechnical terms, and the physician who ignores this obligation is guilty of a form of arrogance.

Even if a physician takes pains to use appropriate language, he may still lack empathy if he is not acutely sensitive to the emotional state of the patient seeking consultation. Distraught by anxiety, fear, and perhaps suspicion, the patient hears the sound but not the meaning of words; reassurances that cancer is an unlikely diagnosis, and a barrage of tests to prove this point, may convince the patient that the opposite is true. "We shall not need another operation" is recorded in the patient's mind as "another operation." Advice that antihypertensive drugs or insulin are in order, possibly for a lifetime, may give the patient the idea of incurability. Even advice on smoking and overeating may elicit negative instead of positive results in the susceptible.

Perhaps one of the most flagrant examples of non-empathic arrogance today — an example not confined to the medical profession — is the pervasive idea that the failure of medical ministrations is the patient's fault. If he does not follow instructions and appears to disregard words of medical wisdom, the patient is labeled as noncompliant — another word in

vogue. Blaming the victim is currently a popular excuse for therapeutic failure, but to me it smacks of arrogance. It is a doctor's obligation, by explanation and persuasion, to get the patient to take his medication as prescribed. If the patient fails to do so, the blame is often as much the physician's as the patient's.

It is of course easy enough for a speaker to moralize and to demand more empathy on the part of the physician. But what practical resources are available to the physician who is aware that the patient's emotional state may color and distort ordinary conversation? Getting to know the patient, his convictions and his problems, and the attitudes of his family, will of course help, but in these days of group practices, ancillary help, specialization, and mobile populations, "getting to know the patient" may be as difficult as containing medical costs. Currently popular measures to enhance medical efficiency also do not help. If a patient — whether an expectant mother, an alcoholic with early cirrhosis, or a heavy smoker with lung cancer — is first processed through a battery of questionnaires or computer terminals, then interrogated

and examined by ancillary personnel, and finally seen by the doctor — to be delivered, to be subjected to liver biopsy, or to undergo pulmonary resection — that patient will not know the doctor, and vice versa. How can the doctor under such circumstances be aware of his patient's thoughts and emotions? Efficient medical practice, I fear, may not be empathic medical practice, and it fosters, if not arrogance, at least the appearance of arrogance.

In medical school, students are told about the perplexity, anxiety, and misapprehension that may affect the patient as he enters the medical-care system, and in the clinical years the fortunate and sensitive student may learn much from talking to those assigned to his supervision. But the effects of lectures and conversations are ephemeral and are no substitute for actual experience. One might suggest, of course, that only those who have been hospitalized during their adolescent or adult years be admitted to medical school. Such a practice would not only increase the number of empathic doctors; it would also permit the whole elaborate system of medical-school admissions to be jettisoned.

MEDICAL INTELLIGENCE



DECREASED BONE DENSITY IN HYPERPROLACTINEMIC WOMEN

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HYPERPROLACTINEMIA is a relatively common clinical problem, occurring in more than 25 per cent of women who present with secondary amenorrhea.^{1,2} Amenorrhea, anovulation, and galactorrhea are well-established clinical sequelae of hyperprolactinemia in women.^{3,4} Hypogonadism occurs in many of these women, and is evidenced by amenorrhea, vaginal-mucosal atrophy, lack of progesterone-

induced uterine withdrawal bleeding, and serum estradiol levels comparable to those of postmenopausal women.^{5,6} In other hyperprolactinemic, amenorrheic women, a relative estrogen deficiency may be present, since serum estradiol concentrations remain tonically fixed at levels found only during the early follicular phase of the menstrual cycle, without the sixfold or greater monthly increase that is characteristic in women with normal cycles.^{7,8} Since estrogen deficiency after oophorectomy in young women has been associated with a high incidence of clinical bone fractures,⁹ we have investigated the possibility that hyperprolactinemic amenorrheic women are at high risk for the development of osteoporosis. Our results show that such women have reduced bone density, which is most severe in those with the lowest serum levels of estradiol.

METHODS

We studied 14 women 20 to 40 years of age with hyperprolactinemic amenorrhea. Patients with hypopituitarism were excluded, and none of the patients were receiving corticosteroids, estrogens, progestins, or other medications. All patients had normal serum thyroxine and thyrotropin concentrations. Patients were admitted to the Clinical Research Center at the Massachusetts General Hospital for the following tests: bone densitometry, sella tomograms, cranial CT scan with contrast, and measurements of serum calcium, inorganic phosphorus, albumin, alkaline phosphatase, creatinine, glucose, parathyroid hormone (PTH), 25-hydroxyvitamin D (25-OHD), estradiol, and prolactin. Pituitary prolactin reserve in all patients was determined by intravenous administration of 200 µg of thyrotropin-releasing hormone (TRH). Bone densitometry was determined in 16 age-matched normal women and in 19 postmenopausal women 48 to 69 years of age who had no history of known osteoporosis or prior estrogen replacement.

We measured bone mineral by direct photon absorptiometry

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