What do we mean by *"the art of medicine"?*

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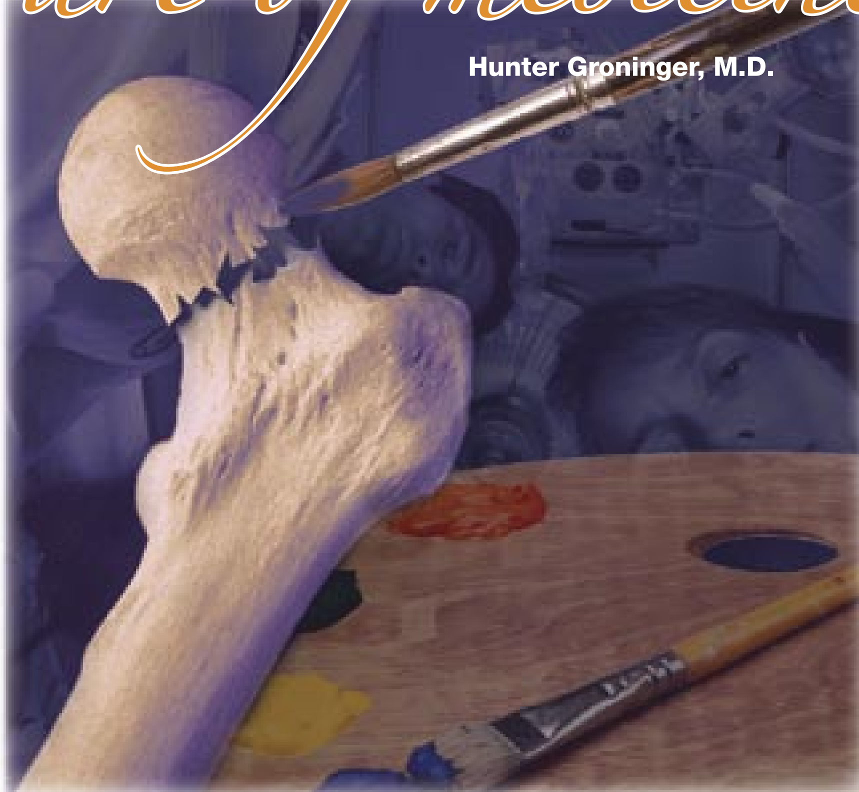

In medicine, language counts. Descriptive words and phrases still form the backbone of patient care. Physicians often make diagnostic choices based on their patients' language. (As an example, "the worst headache of my life" may indicate a subarachnoid hemorrhage.) Patients may change the way they see themselves based on the names given to their illnesses (a "cancer survivor" or a "person with AIDS").[1]

Considering medicine's inability to escape semantics, it is surprising that one particular phrase has survived so long in an unexamined state and has eluded the linguistic sensibilities of caregivers worldwide. "The art of medicine" is a term that, in recent decades, has slipped into the everyday language of the discipline, appearing in many contemporary publications—literary anthologies, social commentaries, medical journals, internet sites, even coffee-table books. For example, in 2002, the president of the American College of Cardiology titled his convocation address "The Art of Medicine."[2] Six months before, a law practice outlined "The Perspective of a Plaintiff's Attorney in Dissembling the Art of Medicine as It Relates to the Interpretation and Management of Cervical Smears."[3]

What do we really mean when we speak or write of "the art of medicine"? Does the phrase allude to the Hippocratic origins of contemporary practice, to an ineluctable,

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unquantifiable clinical competency based on experience, or, as one citation above suggests, to deficits in the scientific methods we hold so dear? Language reflects the people who use it. The phrases we employ reflect something about how we view ourselves as caregivers. Several authors have attempted to formulate their own definitions of "the art of medicine" for their own purposes;[4,5] but no one has explicitly defined the term for all.

Medicine . . . recognized early as a science

The concept of medicine as an "art" originated in the second half of the fifth century B.C., the same period during which medical practice began to break its ties to pagan theology and ritual.[6] Philosophers established rigorous new rules for intellectual disciplines such as rhetoric and history, and also for trade skills such as shipbuilding or navigation. With a surprisingly extensive body of literature behind it, medicine too became one of the *technai*, a Greek term for "art" that also contained an idea of rigorous method in application, and the root of our word *technology*.* Detractors responded that medicine should not be included among the *technai*, because some patients recover without medical intervention, while others die despite physicians' best efforts. Medicine, they argued, does not truly exist, since its outcomes are based, not on skill, but solely on chance.

Among the writings attributed to Hippocrates is a treatise entitled *De arte*, a fierce defense of all the *technai* and an epistemological argument for medicine's place among them.[6,7] What makes medicine an art, he wrote, and what makes the *technai* intellectually valuable to man, is that the practice of these disciplines is not left to chance but is indeed governed by specific principles. *De arte* is, in fact, an early characterization of a kind of scientific method.

At that time, significant debate surrounded the role of ethics in the application of the *technai*. Scholars asked whether the practitioner of the *technai* should sustain a semblance of virtue in his practice in order to reach virtuosity in his art.[8] (If a shipbuilder builds a strong and powerful ship, does it matter if his morals are suspect?) Pythagorean philosophers (among others of that era) generally agreed that physicians should aspire to practice medicine not only with technical prowess, but with moral guidance—hence, the origin of the Hippocratic Oath.[9] Therefore, as a concept, "the art of medicine" evolved to contain *both* elements—technical skill and moral sensibility.

Medicine . . . both art and science

Of course, ideas about the nature of art and the nature of science evolved through time. Over two millennia later, William Osler promulgated the concept that art and science constitute distinct entities, and that good medical practice contains both of them. "The practice of medicine," Osler wrote, "is an art, based on science."[10p119] This implies a notion that science, and therefore the scientific method, is a set of tools for clinical practice. Almost 40 years later, physician Francis Peabody echoed this idea: "[Medicine] is an art, based to an increasing extent on the medical sciences, but comprising much that still remains outside the realm of any science."[11p877] For Osler and Peabody, aspects of clinical practice straying from the natural sciences, while reaching out to the individual patient, compose elements of the "art." Osler wrote, "[F]rom the standpoint of medicine as an art for the prevention and cure of disease, the man who translates hieroglyphics of science into the plain language of healing is certainly the more useful."[10p115] This vague, humanistic notion of "art" seems remarkably different from the rigid concepts defined in ancient Greece (recall that the ethics of patient care proposed by the Hippocratic Oath are written as strict mandates).

What really is meant by "the art of medicine"?

A Medline keyword search for the phrase "art of medicine" results in 235 entries since 1965: 188 citations in English-language journals, the remaining 47 citations in journals from 11 different primary languages, including Norwegian (14 citations), German (11), Swedish (7), Spanish (5), French (2), Danish (2), Serbo-Croatian (2), and Italian, Japanese, Polish, and Russian (one each). While the process of abstract translation into English may account for occasional uses of the term "art of medicine," it is more likely that this variety of linguistic cultures reflects a common concept implied by the phrase itself, regardless of language. For example, in one trilingual journal, "the art of medicine" translates neatly into German "*kunst der medizin*";[12] in a Spanish language journal, the author describes empathy as "*la quintaesencia del arte de la medicina*" ("the quintessence of the art of medicine").[13]

* A variety of translations of the word *techne* (singular form of *technai*) can be found in contemporary Greek-English dictionaries, including "art," "artistry," "craft," "liberal arts," and "applied skill." This paper employs the suggestion by Leon Kass that *techne* is "a term hard to translate, but perhaps best rendered as 'art' if one remembers that it meant primarily the useful arts and handicrafts and only latterly, if at all, the fine arts."[8p216]

A search of the literature also shows increasingly frequent usage of the phrase. The number of citations since 1965 grows progressively by decade, from 18 citations between 1965 and 1974 to 118 since 1995. Without doubt, the association between a concept of "art" and the medical profession parallels recent trends in medical education, including a more central role of interdisciplinary and medical-humanities studies, as well as greater focus for the student on the patient-physician relationship and communication skills.[14]

Most interesting, however, is the wealth of definitions implied by the phrase "art of medicine" and similar terms. Using the semantic technique favored by the creators of the Oxford English Dictionary—searching for a word's meaning within the context of its historical application—one finds a remarkable and often counterintuitive array of definitions within medical literature. Here are some common examples:

1. *Emotional outreach*: "[W]hile we wait for the science of medicine to help us solve the many mysteries of heart disease, we can use the art of medicine to help blunt the impact of illness."[2p1239]

2. *Increased communication between physician and patient*: "The science of medicine involves clinical skills honed through reading textbooks and journals and experience in diagnosing and treating myriad diseases. The art of medicine involves the important communication skills necessary for a good doctor-patient relationship."[15p245] "We call it an art when a doctor demonstrates the technique of gaining the patient's confidence and developing a congenial atmosphere."[5p1230]

3. *Individualized medical care*: "To the extent that physicians make an explicit effort to understand and appreciate the 'life-world' of patients, and even to modify medical recommendations in order to maximize the meaningfulness and goodness-of-fit of these recommendations, the 'art' of medicine also becomes an essential part of routine clinical practice."[12p225]

4. *Traditional clinical methods*: "Through systematic treatment combining the traditional art of medicine with modern technology, the physician should generally be able to care for the premier voice professional."[16pv]

Semantic (im)precision

All of these applications seem to drift far from the rigid Hippocratic concept of "art" or *technai* described above. One reason for this discrepancy is grammatical. In ancient Greece, scholars sought to establish medicine as one of "the arts." "Medicine" is a descriptive term in these translations, and "the art of medicine" is placed alongside "the art of mathematics"—medicine and mathematics both being types of art. By contrast, contemporary users favor an inverse relationship; "art" is a component of medicine, a part of the whole discipline (by implication, so is "science").

A second discrepancy appears to be a function of how we have come to define "art" in our own time. More than any other era, the last century equated "art" with imagination, improvisation, creativity, and even revolution. All of these themes, at least superficially, seem out of place or even dangerous when applied to a modern clinical practice.[4] As did the ancient philosophers, we admire rigorous method, whether in the form of prospective randomized trials or in basic science research. Given this, it seems ironic that we continue to embrace and endorse a phrase that almost negates the precise application of knowledge in clinical practice. Indeed, a 1999 study indicates that one of the barriers to the use of evidence-based medicine in clinical practice was the "negative impact on traditional medical skills and 'the art of medicine.'"[17p236]

Compared with each other, the citations presented above appear inconsistent, even unrelated. Nevertheless, common themes present themselves in these examples and in similar contemporary papers. In particular, two stand apart. First, to practice "the art of medicine" is to promote individual patient care. Patients are physically and physiologically singular.[18] Their life circumstances remain unique.[12] Second, the art of medicine facilitates communication. This communication takes place between physician and patient.[15] The communication is person-to-person,[3] and its quality can be enhanced by reaching out emotionally to the patient.[2,13*]

The indefinable but real part of practicing medicine

At first glance, the variety of contexts in which medicine is juxtaposed with an idea of "art" suggests that we no longer really know what we mean by the term. The themes presented above aim to define our contemporary concept of the "art of medicine" by examining the way in which caregivers have applied it. There is a certain vagueness to the themes. In fact, we might say that one can never define "the art of medicine" with certainty—its meaning can only be approximated.

In the face of such semantic imprecision, the Hippocratic philosophy of medicine and contemporary professionalism have this in common: caregiving necessitates moral virtue in addition to (or even beyond the bounds of) technical dexterity. This moral aspect of clinical care includes the practice of compassion and empathy.[19] It distinguishes medicine that attempts

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*Notably, in medical literature, authors generally limit these descriptions of communication to the physician-patient relationship; of course, communication facilitated by "the art of medicine" could also extend to physician-physician or physician-community relationships.

to “fix” the human body from trades such as auto repair.[8] As the themes presented above assert, even when technical dexterity fails to “fix” the patient’s disease, the caregiver’s professional duty has not ended.

It is nevertheless possible that, in our time, to define “the art of medicine” in strict terms would undercut its very nature. Its application in clinical practice is neither constant nor consistent. It is no secret that, in medicine, as we move from one hospital bed to the next, we encounter remarkably different patients. Even among patients with clinical findings so similar they could be considered equivalent in any given clinical study, we discover vastly dissimilar personal situations. As caregivers, we quickly learn to adapt our approaches to each patient: how we listen, how we position ourselves in the room, how loudly we speak, whether we hold the patient’s hand or not. We understand that one will tolerate a drug, while the next patient, clinically indistinguishable, may not.

Somewhere in this realm of patient care exists an indefinable but very real part of what it means to practice medicine. This is the art of medicine, as we caregivers have defined it ourselves. The art consists neither of optimal physician-patient communication nor the appreciation of a patient’s true individuality. It is neither listening to patients nor empathizing with them. The art of medicine is comprised of all of these together, and much more.

Although its meaning may only be approximated, this elliptical term defines who we are and what we do as caregivers. We seem unable to part with the methodological link between medicine and art. We cannot speak of the art without shaping how we see ourselves in the long shadow of our discipline’s history. When we do, we may be surprised at how much (or how little) we have changed our art since the isle of Cos.

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