"Multidisciplinary Troubles": Causes for Reflection

Wm. David Burns

Plenary Address

Rutgers Biomedical Health Sciences (RBHS) *Master Educators*' *Guild*

Rutgers University

March 18, 2015

Good Morning.

I want to thank your president, Nick Ponzio, Dean Feinberg, the committee, the organizers, and all of you committed to this very important work. May I also thank our plenary speaker, Dr. Gail Jensen, for her opening address.

I am indeed honored to be among master educators. This is also an opportunity to thank Dr. Stuart Cook for his vision in organizing the Guild. I am honored to meet a person whose work on multiple sclerosis I have known since I began paying attention to what researchers were learning about a disease my mother lived with most of her life.

I am humbled to be in the presence of several individuals who have entered my life in heroic ways.

Some of you, I am sure, have worked to improve my health and my life—and the health and lives of those I love and many others—in ways not known directly to me. This makes me recall the physician and rabbi Moses Maimonides' idea of the penultimate form of charity: where the giver and receiver are unknown to one another. I thank you.

Others, less lucky for you I guess, are not unknown to me personally. Thank you for sticking with me even when I get in the way of your best ministrations: I think especially of my good friend Nancy Walworth and my doctor, Jeff Levine.

Normally I preserve an unbroken record of never being invited back to address an audience. But this is my second time at MEG; either your memories are short or your options are constrained!

The first time I had this privilege was a few years ago (2010) when we were able to think about how the AAMC/HHMI report on curriculum change might get implemented.

On that occasion, I was able to describe a program I imagined, and then with the energy, wit and determination of Monica Devanas, who is also with us here today, brought to life at Rutgers in embryonic form in the early 1990's.

In its current iteration, the program is something we call SENCER (Science Education for New Civic Engagements and Responsibilities). For the last 16 years, the National Science Foundation has invested in creating, supporting, and sustaining what one scholar is now calling a "community of transformation" in undergraduate STEM education.

What was distinguished (and strangely radical) about this project at its inception back in the 1990's was its approach: we valorized relevance and application over idealism and abstraction. This was at a time when, in the eyes of those who were still entranced by Allan Bloom's Closing of the American Mind,[1] to seek relevance was to court decadence.

We advocated beginning learning in inquiry and practice and ending in theory and theory building, not the other way around. To some observers at least, we recklessly privileged context over content. We saw science as process and all scientific findings as provisional. Like democracy itself, we figured science as a system designed, to use the words of the late Paul Grobstein of Bryn Mawr, not to get it right, but "to get it less wrong."[2]

If our work had been subjected to the grading rubric of my elementary school report card, we would have received poor marks for "staying [or was it coloring] within the lines."

We can characterize what has become the SENCER approach to promoting learning as one that moves from "outside/in" or "through/to." Initially we were moving from people with AIDS to virology; we were teaching through HIV as a cultural and human phenomenon to the underlying biology one would need to make sense of the disease, on the one hand, and the larger phenomenon, on the other.

---

[1] Closing of the American Mind: How Higher Education Has Failed Democracy and Impoverished the Souls of Today's Students Allan Bloom, Simon and Shuster (1987). From Britannica on-line:

> In 1969 a group of students took control of Cornell's administration building and demanded that certain mandatory classes be dropped in favour of those deemed more "relevant" to them. After the university yielded to their demands, Bloom tendered his resignation, and in 1979 he returned to the University of Chicago. In *The Closing of the American Mind*, Bloom argued that universities no longer taught students how to think and that students, especially those attending the top schools, were unconcerned about the lessons of the past or about examining ideas in a historical context. His blistering critique, which offered no solutions to the crisis in education, blamed misguided curricula, rock music, television, and academic elitism for the spiritual impoverishment of students.

http://www.britannica.com/EBchecked/topic/69980/Allan-Bloom

[2] http://serendip.brynmawr.edu/sci_cult/lesswrong/lesswrong/

You could say we started with the patient and got to the intracellular parasite, not vice versa. But, in the mess that was HIV disease, one could just as justifiably started well outside and beyond the patient, to get to the patient from those distant reaches.

Such was the nature of the "multidisciplinary trouble" that was and is HIV and so many other things that consume our interest today, from asthma to obesity, from malaria to Ebola, from preventing head injuries to figuring out why college students smoke cigarettes, from confronting racism to alleviating hunger, from reducing health disparities to understanding geriatric depression.

The person—the individual embodiment of whatever we are thinking about—really occupies the space between what might look like two great funnels: one containing everything outside and the other containing everything inside that one person's body.

I offer "multidisciplinary trouble" as a kind of heuristic, as a touchstone for organizing learning that sticks, learning that matters, learning that no one wonders: "what do I need this for?" "when will I use this?" (We owe the phrase to Dr. June Osborn, of course, whose 1986 NEJM article was titled; The AIDS Epidemic: *Multidisciplinary Trouble*.[3])

We used the multidisciplinary trouble of HIV to craft a master narrative within which and through which basic canonical biology might become real enough and relevant enough to actually be "learned," maybe even digested, and then remembered by those who were required to take a science course to fulfill that peculiar American goal of being "generally educated."

I will return to a description of SENCER and its animating ideals over the course of my remarks this morning.

What the approach we advocate has to do with "reflection" is the task I have been wrestling with since I recklessly accepted Nick's invitation to attend and speak at today's meeting. I will suggest today that thinking about things as multidisciplinary troubles <u>conscientiously</u> impels us to embrace a practice of reflection.

We've heard a thorough account of reflection as a contemporary pedagogical practice and, thanks again to Monica Devanas, I have now been able to read a boatload, or at least a kayak full, of literature on the subject.

For my contribution this morning, I propose to make a few observations from my favorite and only legitimate subject position—that of a student—supplemented by some examples from my life and career. I would have used the word "reflections' (in the way Edmund Burke used it to catalog his thoughts on the French Revolution)

---

[3] June E. Osborn, M.D.. N Engl J Med 1986; 314:779-782March 20, 1986.

instead of "observations," but I do not want to violate the technical meaning given it today.

The SENCER approach situates learning (as well as research and scholarship) in the midst of multidisciplinary troubles…these complex, capacious ("roomy"), unsolved, issues of civic consequence. These issues don't tend to respect borders, be they disciplinary, political, or geographical. They are unruly, messy, infiltrated.

To understand HIV, for example, as just virology would be to engage in a systematic misunderstanding of it as a complex socially-situated phenomenon. To try to understand or make meaning of HIV without virology, however, would be to engage in another, but different, systematic misunderstanding of it as a phenomenon.

On the clinical and public health side, who would have thought that we would move from a condition that delineated sharp lines between prevention and treatment to a condition where treatment is a preferred form of prevention?

On the human side, who would have predicted that HIV and the Internet (and other well established networks of communication, such as exist among those who cannot rely on regular channels for communication—"The Gay Men's Health Crisis") would create a new form of marriage, one that, among other things, overturned, with mixed consequences, the formerly stately FDA new drug trial protocols and revolutionized not just parts of medicine, but, in my view at least, changed our culture in ways we would never have predicted?

What made this happen at base was that the disease of HIV became radically embodied, by celebrities, Larry Kramer and ACT UP, die-in's, and then in the searing images of the quilt and then thousands and thousands of quilts that told life stories of real people.

To know syphilis might, at one time at least, to have been to know medicine. Today, to <u>know</u> AIDS is to know much more than medicine. HIV is an intracellular parasite…and as such it doesn't have much force outside the body. The body, however, is clearly situated in the map of interdisciplinary trouble…what Robert Lipsyte cleverly named the "country of illness."[4]

It was none other than Alfred North Whitehead who reminded us, in "Aims of Education,"[5] that "you will come to grief as soon as you *forget* that your pupils have *bodies."* (The same is true of medicine! You will come to grief when you mistake

---

[4] <u>In the Country of Illness: Comfort and Advice for the Journey</u>, Robert Lipsyte (Knopf; 1998)

[5] "The Aims of Education," Alfred North Whitehead, presidential address to the Mathematical Association of England, 1916

.

your patients as only having bodies and forget that their bodies live in relation to other bodies and in a panoply of "countries," not just Lipsyte's "Malady" but many others, both metaphorically and geo-politically.)

Speaking of pupils or as we call them "students" and bodies, when I was a lad I served a term as the first university-wide director of the student health service at Rutgers. You would be right to hypothesize that this appointment—of a "hippie" who had a master's degree in political science and a dismal undergraduate record in physics and mathematics—was a sign of the Rutgers' administration's lack of interest in this enterprise. (But you would be wrong! One of my first acts was to appoint Gloria Bachmann as our staff gynecologist…She's still my gynecologist, I am proud to say.)[6]

I recall with some amusement a debate in our executive committee about "how long it should take to treat a urinary tract infection." Opinions varied about the number of minutes we should allot for an appointment. The varied opinions depended on how embodied one considered the infection to be.

After much deliberation, we concluded that, if we could get the infection to come in without the patient, a few minutes would suffice. But if we wanted this to be a useful and productive visit for all concerned, we had to allow time for the real work of medicine to take place: for the clinician to use this precious opportunity to know the patient, to know what might empower the patient both to manage the treatment and to reduce the chances of recurrence.

In a nutshell, we had to think about what we were doing. We had to try to understand ourselves as an event in the patient's day (and life). We had to refrain from thinking about the patient as being just an event in our otherwise busy lives. We had to reflect, to think about what we were doing and why.

(I will digress here for a moment to mention that efforts on the part of clinicians to get to know the patient often seem to undermine that very goal, when person after person in the clinical encounter asks the same question and there appears to be no communication among the professionals, just repeated inquiries. One often wonders if this is a test of the patient's memory.)

As a staff, we engaged in a similar form of reflection when we considered how to treat negative pregnancy results (in the case where the negative result was the patient's preferred outcome). For most of our patients (in those ancient days when one came to a clinic for a pregnancy test), the good news of a negative result was all they really to want to hear. They didn't want to dwell on what had been a stressful period of worrying about a different outcome.

---

[6] Gloria Bachmann is Professor of OB/GYN & Reproductive Sciences and Acting Chair at the Robert Wood Johnson School of Medicine of Rutgers University. See http://www.nlm.nih.gov/locallegends/Biographies/Bachmann_Gloria.html

For us, however, this was the opportunity to enter the patient's life in a way that might be result in an opportunity to equip the patient with the power to avoid a repetition of an undesired situation. Figuring out how to do this—how to intrude without being intrusive, how to use the moment to gain a better future outcome—required reflection, and it also required us to make provisions to insure that, what we were learning, could be actually put in practice.

To me, what reflection means is fairly simple: it means persistently bringing active consciousness to what you do.

Gertrude Stein, who spent a couple of years in medical school herself, once wrote that education is the one thing that is being thought about while it is being done. But she went on to write that it is being thought about in things called colleges where, in New England at least, it was being done so much, that it was being done more than it was being thought about.[7]

Thinking about yourself and what you are doing might be, however, too narrow a form of reflection (as some of the contemporary literature on reflection makes clear). Making it clearer still is the old story of Echo and Narcissus in Ovid: if you are talking so much and listening only to yourself, you might wind up only getting to repeat what you've just heard (even if it sounds like the practice of "effective listening"!).

Narcissus had a bigger problem, though. He was truly reflecting, but he became so entranced with his own reflection that…well, we know what happened and how we have forgiven him and eagerly we greet his return after this long winter. [8]

So how to keep oneself in the reflection enough to see oneself (but to see more than oneself) is one part of the challenge. I propose keeping in mind the interdisciplinary trouble and one's role in it as another strategy to avoid solipsism.

Going outside the self and one's ideas, one's biases, one's beliefs, and one's worldview is not only difficult, but it is risky and even dangerous.

I have a vivid memory of my childhood: we were seated at the dinner table on a Sunday afternoon, with our guests, our middle-aged family doctor and his much younger girlfriend, Polly. (The doctor had left his wife, Iris, with whom my mother and father had also been friends.) It was more than a slightly tense situation already

---

[7] "American Education and Colleges," New York Herald Tribune, 16 March 1935, p. 15.

[8] "No corpse could be found. But there, in the pressed grass where he had perished, a tall flower stood unbroken—bowed, a ruff of white petals round a dainty bugle centre yellow as an egg yolk." Tales from Ovid (translated by Ted Hughes), NY: Farrar, Strauss, and Giroux, 1997, page 78.

when my mother turned to Dr. Terhune and asked, “Don, did you really tell a friend of mine that her hysterectomy would be just fine because she didn’t need all those spare parts any more anyway?”

Don was not sufficiently insulated by alcohol or other defenses from the force of this inquiry, so he rather sheepishly replied, “yes.” Whereupon, my mother leaned his way and asked, “Don, do you still need your testicles?”

Now Don, I’d like to think, had not intended to irritate his patient, or put her down, or discount or demean her body. Indeed, if he could have defended himself, he probably would have said he was trying to put his patient’s mind at ease.

But the effect of what he said clearly made a different impression on his patient, who shared her reactions with her women friends.

But it doesn’t stop there, my mother was not ordinarily given to embarrassing our guests; I suspect she *was* intending to harm Don because he after all had left his wife for the strikingly beautiful younger woman who was no doubt implicated in and also hurt by my mother’s query.

Another Burns, a long time ago wished for a gift:

> O would some power the giftie gie us to see ourselves as others see us.
> (O would some power the gift to give us to see ourselves as others see us.)[9]

It seems to me that the idea of reflection starts with Robert Burns, but then also asks us to turn Burns’ idea on its head.

We should ask for a second gift, that of not making the mistake of seeing others as we imperfectly see ourselves.

To return to Whitehead, we find him anticipating multidisciplinary trouble and the expansive scope that radical reflection defines when he writes:

> **The solution, which I am urging, is to eradicate the fatal disconnection of subjects which kills the vitality of our modern curriculum. There is only one subject-matter for education, and that is Life in all its manifestations.**

Sounds a bit too grand, doesn’t it? (Especially for 1916 in the middle of the Great War…Perhaps, however, that horrible context offers a clue to Whitehead’s expansive thinking and vision.[10])

---

[9] Robert Burns, "To a Louse" - verse 8

[10] In the year 1916, the British armed forces were to sustain some 420,000 casualties in the Battle of the Somme alone.

But can we see the urge towards reflection about the multidisciplinary troubles which we just touch slightly or in which we enmeshed intractably as a way of not just practicing some kind of metacognition, or self-examination, but as a "curriculum" in life and all of its manifestations? Starting with a strand of inquiry about, or a manageable level of consciousness of, all that we do.

Such consciousness can make us think about causality, all kinds of causality. Do you remember the days when we all wanted to know how you could get AIDS (we had a brief recapitulation of this in the Ebola scare—when once again we were speculating about mosquitoes, tears, sneezes, and door handles)?

Sure we had the answers: You get AIDS when you share needles, have unprotected sex, are born of an HIV positive mother, get a bad blood transfusion, sleep with an HIV infected trucker…

I recall Paul Farmer making this all a lot more complicated: How do you get HIV? From building a hydroelectric dam in Haiti, that's how.[11] Distal to be sure, but "reflection" will get us not just to mountains beyond mountains, but causes beyond causes. This requires what is now called "systems thinking," doesn't it?

And reflection might also help us with another kind of causal challenge endemic in so many multidisciplinary troubles: That challenge is to determine if it is materially possible to carry out a plan, say a plan made with a nutritionist, or nurse, or physician. I recall the observation that if one had a single dose of a drug that would cure AIDS but one had to take it with a glass of clean water, some un-Godly percentage of people around the world couldn't be helped, not because they didn't have the drug, but because they didn't have the water.

This past summer, our SENCER community heard from a Duke professor, Sherryl Broverman, who has started a private boarding school for girls in Kenya.[12] She let us know that the causal key to unlocking the condition wherein girls were leaving school and engaging in sex was to acquire funds to purchase sanitary napkins. (A situation that, I was pleased to learn, is being remedied in part through donations from J&J.)

How would we have known this? How can we be sure to discover the "real" causes? And whether the material needed to effect (or cause) the change we desire is present in the life of a patient, or the culture of a community, or the wealth of a nation?

---

[11] AIDS and Accusation: Haiti and the Geography of Blame, University of California Press (1993), pg 7.

[12] http://serc.carleton.edu/sencer/newsletters/89224.html

"Get some rest" is good advice; but if you lack a bed or place to sleep, just how good is it?

So what are some answers? How do you think about multidisciplinary troubles? How do you take Whitehead's advice and consider "life in all its manifestations" as your curriculum?

Let's go back to Maimonides, the physician. We learn that though his own views (informed by his religion) that made him think of sexual intercourse for procreation only, he had to transcend his own beliefs, to advise the Muslim sultan whom he served as physician on how to be able to have sex with all of his wives (according to JB Frank in the Yale Journal of Biology and Medicine).[13] Compare this with the plethora of consciousness laws of today that would permit clinicians to refuse to render commonly accepted care when they claimed a moral objection to a procedure or medication. To be a good clinician, Dr. Maimonides needed to be able to understand and "take in" a worldview entirely different than his own and he had to operate in that world. [14]

This is what, I would argue, a consciousness about what one is doing, about the self and other, and a (literary) imagination permits us or enables us to do.

It comes as no surprise to me, therefore, to see the emphasis on writing, journaling, and recording one's thoughts and observations in the literature on reflection.

And this urge to reflect in writing and to use the experiences of clinical and other encounters to form observations and inform that writing enjoys a grand tradition in the healing arts and medical sciences.

Indeed, it seems to me that only recently have we sanctioned the "divorce" that Whitehead laments between those parts of the curriculum that we call "science" (or "knowledge") from those parts that I call "the wisdom fields," such as philosophy, religion, the arts and letters. (I will leave to you where to put the social sciences. I see them as occupying a linking space.)

And this divorce is lamentable. Perhaps reflection as a practice (and narrative medicine as an emerging field) represent strategies to begin to imagine a rapprochement. If so, we will rebuild a long and distinguished tradition, one kept

---

[13] ww.ncbi.nlm.nih.gov/pmc/articles/PMC2595894/ Yale Journal of Biology and Medicine. 1981 Jan-Feb; 54(1): 79–88.

[14] See, for example, "What does it mean when people say they accept or reject evolution? Lessons from the Muslim world," by Salman Hameed, September 14, 2011 (https://www.hampshire.edu/ssims/lectures-on-science-in-muslim-societies). My colleague, Eliza Reilly, has pointed out that the claim I am making here is the central point of Anne Fadiman's book, The Spirit Catches You and You Fall Down.

alive today in the works of authors like Nuland, Gawande, Verghese, Sacks, and MaryJane Nealon (the nurse who wrote "Beautiful Unbroken").[15]

I started to wonder about doctors (and nurses and public health folks) who we remember as great writers (and whom we may have forgotten were doctors). The list is impressive. [16] Could it be that the ancients were right? Apollo is, after all, the god of both poetry and healing.

I mentioned Maimonides and his respect for or at least capacity to effectively deal with what we might now call "diversity."

Would Rabelais have been able to write, "Doctor, does my urine tell if I should perish or get well?," if he hadn't listened to a patient? Would he have discovered, even if he didn't say it, that laughter is a really good medicine and written so convincingly of all manner of body functions if he hadn't been able to reflect on what he did? Mikhail Bakhtin has described what it means to say of Rabelais, that "a physician who amuses his patients has to know his patients."[17]

And think about Sir Thomas Browne whose "literary style varies according to genre, resulting in a rich, unusual prose that ranges from rough notebook observations to the highest Baroque eloquence."[18] His curiosity, observations, and reflections have taught us much about melancholy.

Or consider the father of parasitology, another physician, Franceso Redi, who discovered that "all life comes from life" and with his experiments with maggots and meat in sealed jars put the kibosh on the idea of spontaneous regeneration. But for me, Redi is best remembered for his close observations on another topic, "Bacco In Toscana"—or the role of wine in the lives of his patients, his fellow Tuscans.[19]

---

[15] Beautiful Unbroken: One Nurse's Life**.** Mary Jane Nealon, Macmillan, 2011

[16] It includes William James whose discussion of "interest" and "the principle of association of ideas in psychology" is a central insight guiding our work in SENCER. See, Talks to Teachers (New York: Henry Holt and Company, 1899), pg 94. And a friend, Professor John Fleming, whose insight about consciousness I quote at the conclusion of this piece and to whom I sent a copy of these remarks, in an e-mail to me, wrote: "I have always thought that the peculiarly humane qualities of the Gospel of Luke were to be explained at least partly in terms of the author's supposed medical vocation." Indeed, the roster of possible sources of inspiration for this piece is extensive. Readers and listeners will, no doubt, have their own candidates for consideration. Indeed, I have my own list: thinking back, I have a special regret for not having used an illustration from Walker Percy!

[17] Rabelais and His World**.** Mikhail Mikhaĭlovich Bakhtin, Indiana U Press, 1984?, pg 179

[18] http://www.amazon.com/Letter-Friend-occasion-Historical-Importance/dp/1500730394

[19] From Leigh Hunt's translation (1825):

Or Dr. Edward Jenner, the father of immunology, whose own very close observations of another kind, enabled him to become a poet of some distinction, who could write in "Signs of Rain"

> Old Betty's joints are on the rack
> Her corns with shooting pains torment her
> And to bed untimely send her.[20]

From the Cowden Clarke's Recollections of Writers we learn about another student of medicine: John Keats. Yes, the great poet John Keats—the man who wrote: '*Beauty* is truth, truth *beauty*,—that is all. Ye know on earth, and all ye need to know'—studied medicine. Consider this rather lengthy passage from Clarke and ask if it sounds familiar, especially the part about sunbeams?

> In one of our conversations, about this period, I alluded to his position at St. Thomas's Hospital, coasting and reconnoitering (sic), as it were, for the purpose of discovering what progress he was making in his profession; which I had taken for granted had been his own selection, and not one chosen for him. The total absorption, therefore, of every other mood of his mind than that of imaginative composition, which had now evidently encompassed him, induced me, from a kind motive, to inquire what was his bias of action for the future; and with that transparent candour which formed the mainspring of his rule of conduct, he at once made no secret of his inability to sympathize with the science of anatomy, as a main pursuit in life; for one of the expressions that he used, in describing his unfitness for its mastery, was perfectly characteristic. He said, in illustration of his argument, "The other day, for instance, during the lecture, there came a sunbeam into the room, and with it a whole troop of creatures floating in the ray; and I was off with them to Oberon and fairyland." And yet, with all his self-styled unfitness for the pursuit, I was afterwards informed that at his subsequent examination he displayed an amount of acquirement which surprised his fellow-students, who had scarcely any other association with him than that of a cheerful, crotchety rhymester. He once talked with me, upon my complaining of stomachic derangement, with a remarkable decision of opinion, describing the functions and actions of the organ with the clearness and, as I presume, technical precision of an adult practitioner; casually illustrating the comment, in his characteristic way, with poetical imagery: the stomach, he said, being like a brood of callow nestlings (opening his

---

> Dearest, if life's vital tide
> Ran not with grape's beside,
> What would life be (short of Cupid)?
> Much too short, and far too stupid.

Bacchus in Tuscany: A Dithyrambic Poem (Francesco Redi, author)

[20]http://www.friendsofthewildflowergarden.org/pages/archive/poems/poem2013_23.html

> capacious mouth) yearning and gaping for sustenance; and, indeed, he merely exemplified what should be, if possible, the "stock in trade" of every poet, viz., to know all that is to be known, "in the heaven above, or in the earth beneath, or in the waters under the earth."[21]

Or, perhaps on a lighter note, we might want to consider Peter Mark Roget of thesaurus fame—a maker of lists and someone we might say was more than mildly OCD. But let's think harder: really good lists cannot come from anything but close inspection and paying attention, whether to the number of steps one takes in a day (one of Roget's obsessions), how words are used more or less synonymously, or things more substantial.

You may be amused by this quote from McGrath's review of a relatively recent biography of Roget, Joshua Kendall's The Man Who Made Lists: "He [Roget] trained as a doctor and though poor social skills kept him from being much of a clinician, he was greatly in demand as a lecturer in anatomy and physiology."[22]

Let's think about a serious physician observer of the human condition, Dr. Anton Chekhov.[23] I would hold him out as a model of what I take it we want in reflection. We are told that "for his refusal to pass judgment on his most despicable characters Chekhov received his most negative criticism." He responded, "Literature is called artistic when it depicts life as it actually is…a writer should be as objective as a chemist."[24] In the "physician heal thyself" category, Chekhov didn't do as well,

---

[21] Recollections of Writers. Charles and Mary Cowden Clarke. London, Sampson Low, Marston, Searle and Rivington, 1878. pg 131

[22] http://www.nytimes.com/2008/04/18/books/18book.html?pagewanted=print&_r=0

[23] Chekhov's Doctors: A Collection of Chekhov's Medical Tales. Jack Coulehan (ed). Kent State U Press, 2003.

[24] Your statement that the world is "teeming with villains and villainesses" is true. Human nature is imperfect, so it would be odd to perceive none but the righteous. Requiring literature to dig up a "pearl" from the pack of villains is tantamount to negating literature altogether. Literature is accepted as an art because it depicts life as it actually is. Its aim is the truth, unconditional and honest. Limiting its functions to as narrow a field as extracting "pearls" would be as deadly for art as requiring Levitan to draw a tree without any dirty bark or yellowed leaves. A "pearl" is a fine thing, I agree. But the writer is not a pastry chef, he is not a cosmetician and not an entertainer. He is a man bound by contract to his sense of duty and to his conscience. Once he undertakes this task, it is too late for excuses, and no matter how horrified, he must do battle with his squeamishness and sully his imagination with the grime of life. He is just like any ordinary reporter. What would you say if a newspaper reporter as a result of squeamishness or a desire to please his readers were to limit his descriptions to honest city fathers, high-minded ladies, and virtuous railroadmen?

> To a chemist there is nothing impure on earth. The writer should be just as objective as the chemist; he should liberate himself from everyday subjectivity

unfortunately (maybe he needed a bit more direct self reflection, as he denied, with unfortunate consequences, his own TB….).

Of course, Arthur Conan Doyle was a doctor, whose notion of what a physician should might just be embodied in Dr. Watson, a man Atul Gawande characterized in the recent New York Times piece as "intelligent, observant and faithful, the way we would want all doctors to be. His lack of cunning is why we trust him."[25]

And returning to our theme of multidisciplinary trouble, we can encounter Frantz Fanon, author of the Wretched of the Earth (subtitled: "A Negro Psychoanalyst's Study of Education in Martinique"). One commentator, Jessica McPherson, writes that Fanon saw psychiatry as revolution and revolution as psychiatry.[26] (Of course, Burke might reflect on this differently!)

I could go onto mention Jane Addams, not a physician but a person I figure as one of the mothers of what we call public health (and more) who brought to her life and her vivid and clear writing a scientific study of poverty.[27]

James McCune Smith, the first African American to earn a medical degree and practice medicine in the United States, was not admitted to the premier medical society of his day on account of his race. His "Dissertation on the Influence of Climate on Longevity" helped us understand race as a social not biological construct. His was a closely observed, elegantly argued study that countered a differently reflected (and bigoted) version of the "reality" of his day.[28]

And speaking of African-American physician writers, there is Dr. Rudolph Fisher, who in his novel, Walls of Jericho, a tale of the Harlem renaissance, writes of Miss Agatha Cramp (can you believe it?), a bigot who "takes on causes the way sticking tape takes up lint." [29] I assume that to have been a daily occurrence in outpatient medicine in the days before we had better tape!

I will finish my little tour of writers with New Jersey's William Carlos Williams, poet and physician, a man who wrote poems that are monuments in American literature.

> and acknowledge that manure piles play a highly respectable role in the landscape and that evil passions are every bit as much a part of life as good ones. — To Maria Kiselyova, January 14, 1887

From: http://mockingbird.creighton.edu/NCW/chekwrit.htm

[25] http://www.nytimes.com/2014/10/26/books/review/atul-gawande-by-the-book.html

[26] http://www.med.uottawa.ca/historyofmedicine/hetenyi/mcpherson.htm

[27] Twenty Years at Hull House. Jane Addams, New York: The Macmillan Company, 1912

[28] http://www.pbs.org/wgbh/amex/partners/early/e_pioneers_smith.html

[29] https://www.press.umich.edu/10672/walls_of_jericho

He also made house calls. And, to keep this in the family, let me mention that Williams, speaking of his inspirations, once claimed: "Keats was my God."

From the Poetry Foundation's pages we learn from the critic Hugh Fox that Williams "see[s] the real function of the imagination as breaking through the alienation of the near at hand and reviving its wonder."

The Foundation's entry on Williams goes on to say:

> Williams's deep sense of humanity pervaded both his work in medicine and his writings. "He loved being a doctor, making house calls, and talking to people," his wife, Flossie, fondly recollected. Perhaps a less subjective appraisal came from Webster Schott, who defined Williams as "an immensely complicated man: energetic, compassionate, socially conscious, depressive, urbane, provincial, tough, fastidious, capricious, independent, dedicated, completely responsive.... He was the complete human being, and all of the qualities of his personality were fused in his writings." And, as Randall Jarrell pointed out, it is precisely in his written work where Williams demonstrates that "he feels, not just says, that the differences between men are less important than their similarities—that he and you and I, together, are the Little Men."
>
> By 1917 and the publication of his third book, *Al Que Quiere!,* "Williams began to apply the Imagist principle of 'direct treatment of the thing' fairly rigorously," declared James Guimond. Also at this time, as Perkins demonstrated, Williams was "beginning to stress that poetry must find its 'primary impetus'... in 'local conditions.'" "I was determined to use the material I knew," Williams later reflected; and as a doctor, Williams knew intimately the people of Rutherford.[30]

Well, I will conclude this review. Lest you be tempted to think that the kind of acutely penetrating writing and explorations of the human condition are possible only in "the old days" when people did make house calls and being a general practitioner was not the unfortunately low status condition that it is today, note that I did not explore with you Verghese, Nuland, Gawande, Farmer, Sacks, and lots of other brilliant observers and gifted clinicians who have used their experience to inform their writing and used their sensibilities as observers and meaning makers to improve their clinical skills. There just isn't time. You no doubt all have your favorites. I hope we will have a chance to discuss them.

I will conclude and summarize by making three points:

(1) Reflection should help us address a condition that I think gets in our way, and may even get in the way of what we really want to achieve in

[30] http://www.poetryfoundation.org/bio/william-carlos-williams

reflective practice. As John Fleming, Chaucer scholar but also author of the book, The Anti-Communist Manifestoes, has observed, "We say that seeing is believing; in fact, it is just as true that believing is seeing."[31] Persistent and penetrating examinations of our reflections (and discussions of these reflections with peers and mentors) can help see when what we are seeing is what we already believe or whether it is the kind of seeing (and reflecting) that really can influence, alter, or even change our beliefs.

(2) Moving from the immediate object of our attention to its contexts (on either side of the body—inside and outside) to the "multidisciplinary trouble" in which it is embedded is a strategy to make the hard work of reflection especially imperative, and potentially worthwhile.

(3) You—certainly as much as any of the modern professions and I suspect much more than most—are heirs to a remarkable legacy of great writers, writers who could not have written what they did without the kind of reflection—the examination of subject position and context—that your ancestors and distinguished contemporaries are. You are so lucky to have patients! You are so lucky to have students!

Much as what the "experts" on reflection may make it seem like this is "new stuff," like SENCER, it's very old and very good stuff, just bottled and packaged differently. I think of SOAPE[32] in medical record keeping—an iterative process of observation and recording, not unlike the strategy we employ in doing SENCER courses. (How different is all this from the ancient Jesuit description of the process of learning—and discernment—that Gail mentioned earlier.)

So, be flexible, get ready to work harder, receive feedback that might be unpleasant (but not as unpleasant I hope as my mother's rebuke of Dr. Terhune), and, following E.M. Forster, "only connect." Make the connections between the small presenting problem to the larger multidisciplinary trouble. Find the "pearl" (and yourself) in the "dungheap" of that trouble. But, remembering Chekhov, don't abandon the dungheap for the pearl! It's the topography of "multidisciplinary trouble" after all—the site and territory of the work that needs to be done. And remember the great lesson from ecology: you can never do only one thing, so do more than one thing on purpose! And write.

We should never forget that "doctor" means teacher—so good teaching (and attention to effective pedagogy) is really a form of good doctoring. And good doctoring entails thinking about and doing good teaching, whether you are a physician, a nurse, a dentist, a physical therapist, or work in public health.

---

[31] The Anti-Communist Manifestos: Four Books That Shaped the Cold War John V. Fleming, W. W. Norton & Company (2009)

[32] Organizing clinical note-taking in categories: "subjective, objective, assessment, plan, evaluation"—and keeping "problem lists."

I have the greatest respect for you and what you do. I hope my thoughts today—and the work we are doing to improve undergraduate education—will aid you, if even in a very small way, as you help your students understand the ways in which you are, and they can become, the great "docents"—the guides—our world so desperately needs.

Thank you for your kind attention.

Wm. David Burns
Executive Director
National Center for Science and Civic Engagement
david.burns@sencer.net

March 18, 2015i