

PERFORMANCE AND HEALING

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PERFORMANCE AND HEALING

Elijah (not his real name) first came to see me in the sports medicine clinic nearly four years ago. He was in his mid-twenties and complained of chronic, debilitating low back, mid back, upper back, and neck pain which had lasted for several years. After an extensive history and physical exam, and costly imaging including ultrasound, computed tomography (CT), and magnetic resonance imaging (MRI), we still had no firm diagnosis. Nonetheless, over the next several months I treated him with medications, physical therapy, injections, manual manipulation, auricular acupuncture, and extensive counseling. Elijah improved, plateaued, and relapsed again. I referred him to specialists in rheumatology, neurology, and orthopedic surgery and they all sent him back. I sent him to the pain clinic and they tried Botox and many other pain control modalities. Everything we tried helped a little or not at all, and nothing helped for long. Elijah was frustrated, but I told him to keep coming back every few months. I would not abandon him to his pain.

Introduction

The body is the vehicle of human life, the means by which we interact with the universe around us. Though people often believe in “ancestral spirits” or even “ghosts”, it is hard to imagine a disembodied existence. What could you do on earth besides observe, and with what organs would you even do that? All of our joys, our sorrows, our pleasures and our pains come through our bodies. Everything that we do and experience passes back and forth between our immaterial self (our spirit), our material self (our bodies), and through the rest of creation.

As a result, one of the greatest goals of man throughout history has been immortality. The epic of the Sumerian hero Gilgamesh chronicles his desire and ultimately his failure to live forever. Legends such as the Fountain of Youth and technologies such as cryogenics have dangled the hope of eternal life just beyond our grasp. Many still hope that modern medicine will someday overcome death. But for now, we all face the grave.

Failing immortality, a long and healthy life has been the goal for most people. The image of old age given by Solomon (Ecclesiastes 12:1-7) is a sad commentary on human physical decline, and until the 20th century it was nearly universal. A geriatrician once described old age as a series of losses. First, people lose their parents. Second, their children leave home. Third, their friends and siblings begin to sicken and die. Meanwhile, their bodies have begun to wither. Finally, the individual passes through the door from which there is no return. The goal today is to lengthen the healthy time and shorten the sick time as much possible.

Biomedical practice, what we call “Western Medicine”, has done much to mitigate the decline in human capabilities related to age. Hearing aids and glasses help improve dimmed senses while a healthy lifestyle and modern medical care reduce the risk of premature death and disability. Death and illness rates from vaccine preventable diseases have plummeted. The average US life expectancy in 1950 for men and women was 65.6 and 71.1 years, respectively.¹ In 2010 it was 76.2 and 81.0.²

Nonetheless, there is much that we cannot do. Many people still die during infancy, childhood, and the young adult years, both in the US and abroad. Of those who remain alive, cancer, heart disease, arthritis, and a host of other debilitating conditions rob companies of

¹ “Life Expectancy - United States,” Data 360, accessed November 27, 2015, http://www.data360.org/dsg.aspx?Data_Set_Group_Id=195

² Elizabeth Arias PhD, “United States Life Tables, 2010,” National Vital Statistics Reports, November 6, 2014, accessed November 27, 2015, http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_07.pdf.

workers, families of breadwinners, and individuals of happiness. Chronic pain affects 1/3 of all Americans, usually low back pain or arthritis.³ Twenty-six point two percent (26.2%) of Americans suffer from a diagnosable mental health condition in any given year.⁴ Partly as a result, drug related deaths are increasing. Since 1980 prescription drug overdose rates have increased 500%. Prescription drug overdoses killed more people than motor vehicle accidents in 2009.⁵

Chronic pain is the most common complaint in my sports medicine practice, and I have a vast armamentarium to treat it. Medications, manual therapy (manipulation), physical therapy, injections, and education on lifestyle changes help over 90% of my patients improve. Patients with mental health issues comprise a significant percentage of my family medicine panel, and most of them get better with medication, counseling, and lifestyle improvements such as better sleep, exercise and nutrition. Overall, I am blessed with a successful medical practice.

But there are those that don't get better. My goal with these patients is not zero pain and perfect function, but tolerable pain and maximal function. Like the Good Shepherd who will leave His 99 sheep to search for the one that is lost, I keep trying to figure out how to help those few that I can't heal. I have used complementary and alternative medicine (CAM) techniques such as laser therapy, acupuncture, and hypnosis. With each intervention, a few more patients improve.

³ C.B. Johannes et al., "The Prevalence of Chronic Pain in United States Adults: Results of an Internet-Based Survey," PubMed.gov, August 25, 2010, accessed November 27, 2015, <http://www.ncbi.nlm.nih.gov/pubmed/20797916>.

⁴ R.C. Kessler et al., "Prevalence, Severity, and Comorbidity of 12-Month Dsm-Iv Disorders in the National Comorbidity Survey Replication.," PubMed.gov, June, 2005, accessed November 27, 2015, <http://www.ncbi.nlm.nih.gov/pubmed/15939839>.

⁵ Addressing Prescription Drug Abuse in the United States - Current Activities and Future Opportunities, CDC, accessed November 27, 2015, http://www.cdc.gov/HomeandRecreationalSafety/pdf/HHS_Prescription_Drug_Abuse_Report_09.2013.pdf

Over my decades of practice I have noticed that many patients get better simply by coming to the doctor's office. They come in with high levels of pain and leave with lower levels, even when I don't change their medications or do a specific intervention. It seems that the act of coming in for care makes patients better. These experiences led me to ponder the clinical encounter itself, the ritual that occurs when one person, a patient, visits another person, a doctor, and asks for healing.

The purpose of this paper is to evaluate the effects of ritual, drama, and the performing arts in healing. I have included acting and dance. I have only considered music insofar as it is an essential element of healing rituals. Knowing these effects can also help patients get better.

Performance and Healing in History and non-Western Culture

The Greek playwright Sophocles used the Plague of Thebes, probably caused by *Brucella Abortus*, as the backdrop for his classic tale *Oedipus Rex*.⁶ The king's own conduct is cited as the cause for the "religious pollution". The people use prayer and religious ritual to try to stop the outbreak.

During the Hippocratic Era, music and theater were considered essential in treating both physical and mental illnesses. The alternating tones of flute and harp were used to treat gout.⁷ Patients needing psychotherapy were shown the ancient tragedies. The Theater at the Ancient Temple of Epidaurus was renowned for its productions encouraging "release of emotions through performance."⁸

⁶ Antonis A. Kousoulis et al., "The Plague of Thebes, a Historical Epidemic in Sophocles' *Oedipus Rex*," *Emerging Infectious Diseases* 18, no. 1 (Jan 2012): 153-57.

⁷ Christos F. Kleisiaris, Chrisanthos Sfakianakis, and Ioanna V. Papathanasiou, "Health Care Practices in Ancient Greece: The Hippocratic Ideal," *Journal of Medical Ethics and History of Medicine* 7, no. 6 (2014 Mar 15).

⁸ *Ibid.*.

The performing arts have played a vital role of healing in history. The Sanni Yakuma is an exorcism ritual in Sri Lanka which features dancers using various masks to portray diseases (Table 1). Accompanied by actors and musicians, the exorcist performs the ritual using a mask reflecting the patient’s complaint and the ceremony ends with an exorcist wearing the mask of the chief demon (Maha Kola).

Table 1 – Sanni classification of disease⁹

Demon (<i>Sanniya</i>)	Literal translation	Associated conditions
Amukku	Vomiting bouts	Vomiting and stomach diseases
Abutha	Non-spirit related	Not spirit related insanity
Butha	Spirit related	Spirit related insanity
Bihiri	Deaf	Deafness
Deva	Divine	Epidemic diseases
Gedi	Lumps	Boils and skin diseases
Gini Jala	Great fire or flame	Malaria and high fevers
Golu	Dumb	Dumbness
Gulma	Worms (especially hookworm)	Parasitic worms and stomach diseases
Jala	Water or diarrhoea	Cholera and chills
Kana	Blind	Blindness
Kora	Lame	Lameness and paralysis
Maru	Death	Delirium and death

⁹ Mark S. Bailey and H Janaka de Silva, “Sri Lankan *sanni* Masks: An Ancient Classification of Disease,” *BMJ: British Medical Journal* 333.7582 (2006): 1327–1328.

Naga	Snake (especially cobra)	Bad dreams about snakes
Pissu	Insanity	Temporary insanity
Pith	Bilious	Bilious diseases
Slesma	Phlegm	Phlegm and epilepsy
Vatha	Wind humour or rheumatic	Flatulence and rheumatism

There are countless other examples of the performing arts used for healing in history and in other cultures. We will turn, however, to the performing arts as an element of the healing (clinical) encounter.

Performance and the Clinical Encounter

Merriam-Webster defines drama as a “composition in verse or prose intended to portray life or character or to tell a story usually involving conflicts and emotions through action and dialogue and typically designed for theatrical performance.”¹⁰ Ritual is defined as “an act or series of acts done in a particular situation and in the same way each time.”¹¹ Notably, drama and ritual are each done for a specific purpose, whether entertainment, education, behavioral change, or even healing. Dr. Charles Hayter, a radiation oncologist and playwright, writes “The practice of medicine is quite theatrical.”¹²

¹⁰ Merriam-Webster, s.v. “Drama,” accessed November 27, 2015, <http://www.merriam-webster.com/dictionary/drama>.

¹¹ Merriam-Webster, s.v. “Ritual,” accessed November 27, 2015, <http://www.merriam-webster.com/dictionary/ritual>.

¹² Paul Gessell, “Drama in Medicine,” *Canadian Medical Association Journal* 186, no. 12 (September 2, 2014): 938-39.

Ritual is a specific type of drama. Just as dramas have actors, including the hero, the villain, and the “damsel in distress”, so do healing rituals, including the healer, the disease, and the sick person. Just as dramas have a set, props and an audience, so do healing rituals, such as the clinic, the medical tools (like a stethoscope), and the onlookers. Just as a drama has a stereotyped flow, including setting/introduction, rising action, climax, falling action, and resolution, so does the modern Western medical healing ritual, including history, physical exam, laboratory and imaging studies, intervention, and follow up. Traditional medical rituals follow similar lines of progression.

When I was on the shores of Lake Sevan on a mission trip in Armenia in 2011 (setting and introduction), a friend and supporting pastor at our church twisted his left knee during a volleyball game (rising action). He hobbled over and fell onto a blanket under a tree. In America, medical care is private, but not in Central Asia. People gathered, both from our group and others, and soon we had a crowd of over 30 onlookers. Focusing on the patient and not the audience, I took a history, did a physical examination, and manipulated his knee (more rising action). This freed his trapped meniscus from the bones that were pinching it (climax). The pain immediately stopped, my friend got up, and he walked (falling action and resolution). As if at a play, the onlookers (the audience) erupted in applause. The rest of the trip members of our group told others about the “miracle” which had happened.

Priests reenact a brief version of the Last Supper when they give the Eucharist, and Muslim pilgrims “perform” the stoning of the Devil during the Hajj. Even pathologic rituals, such as the repetitive hand washing of a patient with Obsessive-Compulsive Disorder (OCD), tell a story. The patient has often had some trauma in the past involving a feeling of being unclean (such as sexual abuse). The ritual involves an attempt to undo what was done.

Regardless of culture, the clinical encounter of healer and patient is a ritual, a drama, with some actions stereotyped and some spontaneous. Just as with a movie or stage play, the healing ritual is imbued with belief and uncertainty. The audience and the patient both expect the best, but anxiety and fear are always lurking. Theatergoers open themselves up to the effects of the drama by suspending disbelief, decreasing other sensory inputs (darkened theater, phones off), and paying attention. Patients open themselves up to the effects of the healing ritual by telling their story, answering questions (sometimes very intimate ones), disrobing, letting the clinician probe parts of the body that no other outsider could ever touch, and even letting him inflict pain. Just like in a theater, modern medical exam rooms are austere, focusing the patient's attention on the doctor.

The word placebo is Latin for "I will please", and the placebo effect, in which patients get better despite being given a non-functional treatment, is well known in health care. Recognized in medicine since the 19th century, placebos are generally inert drugs (such as sugar pills), sham surgeries, and other interventions. The underlying mechanism is that patients who believe they will feel better generally do.

The opposite is the nocebo (Latin "I will harm") effect, in which patients do not believe that they will get better and usually don't. Even when treated with medicine, surgeries, and other interventions of known effectiveness, patients who are skeptical that they will improve are most often right. Jesus Himself encountered this problem in Nazareth, "He did not do many miracles there because of their lack of faith" (Matthew 13:58).

Ted J. Kaptchuk, in his review article entitled *Placebo studies and ritual theory: a comparative analysis of Navajo, acupuncture, and biomedical healing*, examined the health

effects of the clinical encounter in these three different settings. Kaptchuk's paper considered the placebo effect of the entire clinical encounter, not just one intervention in the encounter.

The Navajo nation has chantway rituals, including about 30 distinct ceremonies lasting one to nine days each.¹³ The general storyline is that the hero begins as a marginal person, undergoes suffering, and is finally redeemed and transformed into a Holy Person. In the case of a healing ritual, this plot provides the narrative skeleton. The healer functions as priest, ensuring that the dwelling, the patient, and even the family and audience, are scrupulously purified. Moral cleansing, including confessions and apologies, is required. The healer also acts as a stage manager, coordinating chanters, dancers, costumes, props, and a host of other details. Over the ensuing days the medicine man uses a complex ritual to bring the divine presence of the Holy Ones, captured in a Navajo sandpainting, into the patient. This process makes the patient (temporarily) a Holy Person, and he is treated as such by the community.¹⁴

People coming to a modern acupuncturist's office are greeted with Asian art work, Chinese herbs, and a panoply of Western biomedical gadgets. The practitioner begins with a formalized assessment and diagnosis, which "links the patient's condition to meteorology and macrocosmic forces and connects the patient to them."¹⁵ The acupuncture needles pierce the patient, producing the "openness" for the healing power to come. They also serve as conduits for vitalistic energies of the cosmos (qi) to move throughout the body.¹⁶ Yin-yang, wind, dampness, and fire must be balanced. The acupuncturist is highly attuned to the patient's reaction, changing his actions based on how the person responds.

¹³ Ted J. Kaptchuk, "Placebo Studies and Ritual Theory: A Comparative Analysis of Navajo, Acupuncture and Biomedical Healing," *Philosophical Transaction of The Royal Society* 366 (2011): 1850.

¹⁴ *Ibid.*, 1851.

¹⁵ *Ibid.*, 1852.

¹⁶ *Ibid.*.

The ritual of a modern clinical encounter usually begins with a patient calling for an appointment. Waiting times, whether on the phone, at home or in the clinic, communicate that the system is very busy saving lives and health. This facility is in great demand. Full waiting rooms, a clean and efficient office, busy staff, and degree certificates on the walls form the setting. Costumes include the physician's white coat, the nurses' colorful scrubs, and the thin and revealing patient gown. Such attire helps to delineate the power relationships between the actors in the play. Trust between the actors is paramount, and may be built more by sincerity than by the correct performance of prescribed behaviors.¹⁷

The same feelings one encounters in the theater, hopeful expectation but fear of disappointment, are present here. But while a person watching a show can opt out by leaving or even looking away, a patient cannot. If he leaves he will still have the problem that brought him in the first place. He may actually be worse because the failure of the actors to resolve the issue the first time may make it harder to resolve in the future. With each fractured provider-patient relationship and each failed treatment, hope dims and expectations diminish. The hardest patients to treat are those who have seen many doctors and tried many interventions. Providers despair of being able to ever help them, and patients despair of ever getting better.

Notice that several things are happening in each of these healing dramas (rituals). First, space, time and words separate the healing space from ordinary space. The Navajo medicine man operates in dwellings that have been specially purified while the acupuncturist and physician work in designated, purpose-specific space. The language of the healer, the acupuncturist and the physician is arcane; very unlike day to day language. Second, both healer and patient inhabit and are equally affected by a multisensory setting. The busy front desk workers, the sterile

¹⁷ Ibid..

environment, and the diplomas stimulate both to play the correct role, whether as expert and guide or supplicant and follower.¹⁸

Third, some healing power is coming from outside the patient into the patient. The touch of the medicine man may be the source of the power, the vehicle of the power, or both. The same is true for the acupuncturist and physician. When the treatment is medicine, patients often consider the physician to be the vehicle of healing. When the treatment is manipulation or surgery, patients may also consider the physician to be the source of healing.

After the encounter there is a waiting period for the patient to assume their new status. Both patient and healer have the opportunity to reflect on the visit, assign meaning to it, and improve it next time. Ultimately, these healing rituals fuse religion (a concept of what is happening in the macrocosm), morality (perceptions of disease and injury always have moral components), and art (the setting, the props, the costumes, etc.) into a single experience.¹⁹

We must note that the effects of rituals have undeniable clinical effects. Religious and spiritual interventions such as prayer and meditation, important parts of many healing rituals, decrease anxiety, stress, alcoholism and depression.²⁰ Additionally, rituals have neurobiological correlates, showing that something more is happening than we may be willing to admit.²¹

The Western biomedical model specifically attempts to exclude placebos such as ritual (drama) from exerting any therapeutic effects. Such willful unrecognition may make biomedical interventions such as medicines and surgeries appear stronger than they actually are. For example, if a patient with a headache gets a 50% improvement from Tylenol and 10%

¹⁸ Ibid., 1853.

¹⁹ Ibid., 1854.

²⁰ J.P.B. Goncalves et al., "Religious and Spiritual Interventions in Mental Health Care: A Systematic Review and Meta-Analysis of Randomized Controlled Clinical Trials," *Psychological Medicine* 45 (2015): 2937-49.

²¹ Kaptchuk, 1856.

improvement from the ritual of the office visit, but denies the effect of the ritual, he must attribute all 60% of his pain reduction to the Tylenol.

One other comment should be made about ritual and healing. Religions have played a therapeutic role in the lives of their adherents for centuries. The role of shaman is both spiritual and physical. Priests were called upon to heal in medieval Europe. Even in the modern US Army, physicians and chaplains work closely together for the sake of the patient, especially in the area of mental health.

With the decline in religion in the Western World, some of the therapeutic role played by Christianity and other faiths is now played by clinicians, counselors and therapists.²² Patients are asked to believe in science for their healing rather than having faith in God. Medical technology therefore receives credit for the benefits of ritual in making people well. In the postmodern world, with the limitations of science more apparent, the sick often do not know where to place their faith. Ritual becomes more diverse, more individualized, and less powerful because it loses much of its corporate effect. As we shall see in the next section, there is power in thousands of people uniting for common healing purpose.

Certain cultures maintain their native healing rituals, and the concomitant drama, better than others. Both Native American and Hispanic cultures use Western (biomedical) medicine and traditional medicine. According to a 2013 survey with Pew Research, 1/7 of Hispanic adults in a nationally representative sample in the US used traditional medicine.²³ Another study of 389 Native Americans found that half used ethnic healing practices.²⁴ Groups frequently use

²² Clive Marsh, *Theology Goes to the Movies: An Introduction to Critical Christian Thinking* (London: Routledge, 2007), 73.

²³ Denece O. Kesler, MD, MPH et al., "Assimilating Traditional Healing Into Preventive Medicine Residency Curriculum," *American Journal of Preventive Medicine* 49, no. 5 Supplement 3 (November 2015): 263-4.

²⁴ *Ibid.*.

traditional medicine for problems less amenable to Western treatments, such as behavioral health issues, chronic pain, and substance abuse. As noted above, these are precisely the problems which are more treatable with the drama of healing ritual.

In truth, the same God who enables the ritual that heals also provides the technology that heals. Both are powerful, and both come from the Triune Lord in whom we live and breathe.

Performance and Public Healing

Lourdes is famous for miraculous healings. A hamlet lying at the feet of the Pyrenees in Southern France, the town became famous in 1858 when Bernadette Soubirous, who was later canonized, had visions of the Virgin Mary. With six million visitors per year, Lourdes is second only to Paris as a tourist destination. The theme of Lourdes is healing, and in addition to having the second most hotel rooms in France, Lourdes has a network of buildings and services that enable the sick to visit.²⁵ Every year, tens of thousands of healthy volunteers come to Lourdes to take care of the hundreds of thousands of sick that come seeking healing. Volunteers push wheelchairs, feed, and even provide personal hygiene for people that they do not know. Pilgrims sing, pray, and attend a candlelight vigil. Priests anoint the sick.

There have been many claims of miraculous healing, and many debates over what actually occurred. Nonetheless, many who go to Lourdes have found healing in less spectacular ways. Some enjoy pain relief, whether temporary or permanent.²⁶ Others have an unforgettable

²⁵ Sarah Goldingay, Paul Dieppe, and Miguel Farias, "And the Pain Just Disappeared Into Insignificance': The Healing Resonance in Lourdes -- Performance, Psychology and Caring," *International Review of Psychiatry* 26, no. 3 (June 2014): 315-23.

²⁶ *Ibid.*.

experience of peace in a community of helpers. Still others find direction and hope for their lives. People return because they find something there, even though it is hard to explain.

A trio of researchers, including a physician, an actress, and a psychologist visited Lourdes to conduct ethnographic research and to discover some of the reasons for its remarkable record of healing. The actress found the miracle of Lourdes in its singularity of purpose, where the performance of healing transcends culture and history.²⁷ Healing occurs without checklists or structures, unlike in Western hospitals, and in an environment of trust. The psychologist perceived Lourdes as highly, even “oppressively” physical. The sick were ever present and their care needs ever imminent. The rituals of bathing, praying, singing, and working consumed every moment, leaving little time for reflection. He found the miracle of Lourdes in the collective rituals.²⁸

Western medicine tends to see healing as an individual event that occurs via biomedical means according to strictly defined laws of nature. It is less able to see healing as a corporate event that is heavily influenced by emotional, social, moral, and spiritual factors. The physician discovered that his habit of attributing therapeutic success only to the Western model was lacking. The performance at Lourdes reminds us of the power of community, and the power of united purpose. More happens at Lourdes than meets the eye, or the microscope.

Performance and Medical Education

In medical practice there is no more sensitive task than telling a family member that a patient has died. No matter how much experience a physician has, there are no good words to inform a loved one of the end of mortal life. Nonetheless, some techniques are better than others.

²⁷ Ibid..

²⁸ Ibid..

Forum Theater incorporates audience participation into a performance, and a Swedish medical school has introduced a play, entitled Marathon Death, to teach death notification to medical students.²⁹ In it teachers play the role of the family member and medical students play the physician. There is no audience but the exercise is videotaped for discussion later. Participants found that Marathon Death builds cognitive skills, but also aids empathy, and develops trust. Students often expect a calm process and are surprised at the reactions of those they have just informed.

Another drama technique in medical education is Playback Theater. In it drama troupes act out people's experiences in a comfortable environment. Houston Playback Theater performs during the Compassion and Art of Medicine course at the Baylor School of Medicine. One student couldn't find a heartbeat the first time he used a stethoscope, so he told the troupe about it and they acted it out. Another related his first visit back to his home country after coming to America. A third spoke of her ambivalence about being a doctor. In each case, seeing their conflict acted out publically (and sometimes humorously) helped the students deal with their feelings and fears.³⁰

Another technique for using the performing arts to train healers is to "Make Things Strange." A large part of medical diagnosis is pattern recognition, because diseases and injuries tend to have unique patterns of historical findings, physical manifestations, and lab and radiology results. Recognizing patterns is a quick and efficient way of making diagnoses and directing treatment. However, when patterns resemble each other, misdiagnoses and inappropriate

²⁹ Anna Nordstrom, Annchristine Fjellman-Wiklund, and Tomas Grysell, "Drama as a Pedagogical Tool for Practicing Death Notification-Experiences from Swedish Medical Students," *BMC Medical Education* 11, no. 74 (2011).

³⁰ Ramiro Salas et al., "Playback Theatre as a Tool to Enhance Communication in Medical Education," *Medical Education Online* (23 December 2013), accessed November 28, 2015, <http://med-ed-online.net/index.php/meo/article/view/22622>.

treatment result. Further, medicine by pattern recognition removes the individuality and even the personhood of each patient. Using literature, film and other visual arts to challenge the thought patterns of medical students provides an important way to “make these patterns look strange” and produce better medical thinking.³¹

Performance and Behavior Change

Health care trainees, as well as the general population, consume medical information through television, the movies, and other performing arts. Some studies measured the use the medical dramas to teach communication and professionalism to students. More than 80% of medical and nursing students from a sample at Johns Hopkins watched television medical dramas.³² Over half of these students watched with friends, and half discussed ethical issues presented with others. Thus these dramas serve as an informal curriculum which will shape these healers-in-training for decades to come.

Television can influence health behavior in the short term. After an *ER* episode discussed emergency contraception (EC), general viewers’ awareness of EC increased by 17%. The knowledge did not persist, however. Within two months, awareness of EC declined to pre-episode levels.³³ A similar phenomenon happened after *ER* aired a segment on human papilloma virus.

The performing arts, most widespread through television, can also change behavior as a result of setting up unrealistic expectations. Members of the general public in the United States

³¹ Arno K. Kumagai MD and Delese Wear PhD, “‘Making Strange’: A Role for the Humanities in Medical Education,” *Academic Medicine* 89, no. 7 (July 2014): 973-77.

³² Matthew J. Czarny et al., “Medical and Nursing Students’ Television Viewing Habits: Potential Implications for Bioethics,” *American Journal of Bioethics* 8, no. 12 (2008 December): 1-8.

³³ Mollyann Brodie et al., “Communicating Health Information through the Entertainment Media,” *Health Affairs* 20, no. 1 (January/February 2001): 192-99.

routinely get medical information through television. One study found that 92% of survey respondents over 62 years of age admitted acquiring medical information from TV.³⁴ This would be fine if what they learned was correct, but unfortunately it often is not. First, survival after cardiopulmonary resuscitation (CPR) averaged across three popular shows, *Rescue 911*, *ER* and *Chicago Hope* was 75%. In reality, long term survival (walking out of the hospital) occurs less than 30% of the time.³⁵ Second, these programs also showed young and middle aged patients getting CPR after acute injuries, whereas in reality most CPR is done for the elderly due to cardiac disease. Third, patients who survive rarely develop complications after TV CPR, but real patients can have severe neurologic damage.³⁶ Infants, young children, the elderly and minorities were underrepresented.³⁷

While we understand that TV producers prioritize entertainment over education, this unreality has important consequences. Elderly patients who get information about CPR on TV have significantly higher expectations of survival than those who do not.³⁸ As a result, they opt to receive CPR when it may not be in their best interest. In another study, when clinicians explained the true survival rate and prognosis of CPR to patients, only 10% said that they would still choose to receive it.³⁹

³⁴ G. Kirk Jones MD, Kori L. Brewer PhD, and Herbert G. Garrison MD MPH, "Public Expectations of Survival Following Cardiopulmonary Resuscitation," *Academic Emergency Medicine* 7, no. 1 (January 2000).

³⁵ Susan J. Diem MD MPH, John D. Lantos MD, and James A. Tulskey MD, "Cardiopulmonary Resuscitation On Television: Miracles and Misinformation," *The New England Journal of Medicine* 334, no. 24 (June 13, 1996): 1581.

³⁶ *Ibid.*.

³⁷ Brian A. Primack MD EdM MS et al., "*ER* vs. ED: A Comparison of Televised and Real-Life Emergency Medicine," *Journal of Emergency Medicine* 43, no. 6 (2012 December): 1160-66.

³⁸ Jones, 51.

³⁹ *Ibid.* 51.

The situation is the same for patients with coma. In one study of *Guiding Light*, *General Hospital*, *One Life to Live*, *Days of our Lives*, *All My Children*, *Passions*, *As the World Turns*, *The Young and the Restless*, and *The Bold and the Beautiful*, 57/73 patients recovered fully (89%). Of those that regained consciousness, 49/57 (86%) had no residual disability.⁴⁰ In real medical practice, less than 10% of patients with a non-traumatic coma recover completely, and rates after traumatic coma are nowhere near those on TV.⁴¹ The elderly and minorities were again underrepresented.

Such misguided expectations can have important consequences for care decisions, the relationship between physicians, patients and families, and medical malpractice. In an effort to mitigate these problems, the *Los Angeles Times* analyzes the medical accuracy of shows periodically in its Health Section.⁴² The American Academy of Family Physicians addressed this problem recently, noting a whole new set of medical shows including *Code Black*, *Chicago Med*, *Heartbreaker*, and *Dr. Ken*.⁴³ The Academy advocates more medical input into television shows.

Suicide is another potential area of concern. Non-fictional media stories on suicide may trigger suicides (Werther effect) while non-fiction stories on positive coping in hard circumstances are associated with reductions in suicide (Papageno effect).⁴⁴ We don't know if fictional stories have the same effect, but suicide does seem to be associated with how deeply a

⁴⁰ David Casarett et al., "Epidemiology and Prognosis of Coma in Daytime Television Dramas," *British Medical Journal* (December 2005): 1538.

⁴¹ *Ibid.*, 1539

⁴² Anna Pavlov PhD and Gregory E. Dahlquist MD, "Teaching Communication and Professionalism Using a Popular Medical Drama," *Literature and the Arts in Medical Education* 42, no. 1 (2010): 25.

⁴³ Margaux Lazarin, D.O., "They're (Usually) Not Doctors, but They Play Them On TV," *Fresh Perspectives: New Docs in Practice* (blog), *AAFP*, November 18, 2015, accessed November 28, 2015, http://blogs.aafp.org/cfr/freshperspectives/entry/they_re_usually_not_doctors#.Vk3hUTbfbE.mailto.

⁴⁴ Benedikt Till et al., "Who Identifies with Suicidal Film Characters? Determinants of Identification with Suicidal Protagonists of Drama Films," *Psychiatria Danubina* 25, no. 2 (2013): 158-62.

viewer empathizes with a character. Demographic similarities such as race and sex are not enough to generate this empathy. More research is needed.

One notorious example of drama and suicide is the People's Temple, the religious group that committed mass suicide on their compound at Jonestown, Guyana, in 1978. Over 900 people died. Their leader Jim Jones taught them that they would become martyrs of socialism and equality on the world stage. Group members had "rituals of suicide" in which they practiced the act and made videos expressing their views.⁴⁵ Performing arts were used not to heal, but to kill. Practicing their deaths habituated members to the terrible drama that would play out.

Performance Participation and Healing

The performing arts also play an important health role for participants. One Nigerian study examined how to motivate patients to exercise. Dance is an important part of Nigerian culture, is inexpensive and is simple. Dance does not require specialized equipment (like weight-lifting does) or a lot of space (like running does). This study found that it was easier to get people to dance for fitness than to do a formal workout. The effects were good; the group that danced tended to have better blood pressure control than the group that did not, though the result did not reach statistical significance.⁴⁶ A study from Hawaii found hula dancing effective at improving compliance with cardiac rehabilitation.⁴⁷ There is a large body of literature proving

⁴⁵ James R. Lewis, ed., *Violence and New Religious Movements* (New York: Oxford University Press, 2011), 109.

⁴⁶ FA Maruf, AO Akinpelu, and BL Salako. "Effects of Aerobic Exercise and Drug Therapy On Blood Pressure and Antihypertensive Drugs: A Randomized Controlled Trial," *African Health Sciences* 13, no. 1 (March 2013): 1-9.

⁴⁷ Gregory G. Maskarinec PhD et al., "Patient Perspectives On the Hula Empowering Lifestyle Adaptation Study: Benefits of Dancing Hula for Cardiac Rehabilitation," *Health Promotion Practice* 16, no. 1 (2015 January): 109-14.

the physical activity such as dance improves health. Musical performance is also good for health, but that topic is outside the scope of this paper.

Conclusion

When asked how he as an actor could be president, American President Ronald Reagan replied “How can the President not be an actor?” He understood, along with William Shakespeare, that “all the world is a stage.” Healing is no exception. The performing arts, including acting and dance, play a major role in helping people get better. Performance helped the sick get better in antiquity and in non-Western cultures. Performance is a major part of every clinical encounter. Acting is important in major public healing rituals such as those found at Lourdes. It helps train new doctors and nurses. Performance shapes how the general public perceives medicine, and what they expect in care. Finally, performance participation helps heal, especially in dance.

We shudder when we look at the past. In response we hope that evolution will produce a better man and science a better world. As a result, modern Americans are more heavily influenced by naturalism, the view of the world that takes into account only natural forces and excludes the spiritual, than we care to admit. The Church is no exception. Science and technology have been so successful in transforming our lives and our health that we expect it to solve every problem and lead eventually to physical immortality. And yet sickness, injury and death continue.

The finest healers will embrace biomedical medicine fully while admitting its limitations. They will also understand, respect, and even use other powers which will help their patients heal. Placebos, music, animals, non-Western medicine, and many other things fall into this category.

In this article, we have seen that the performing arts can help heal the sick. Those who would heal others will use them.

Elijah kept coming back, following up about every six months. Gradually his pain improved. Sometimes we just talked, other times I changed his medication, injected a joint, or performed musculoskeletal manipulation. As the years passed, his pain finally went away, at least most of the time. I cannot point to any dramatic turning points or any miraculous therapies. His road to recovery was slow, with three steps forward and two steps back. He will have pain in the future, and we will address it as we have before. With a mysterious combination of medical science and medical art, Elijah is living a reasonable life, enjoying minimum pain and maximum function. We wish that every patient would do as well.

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