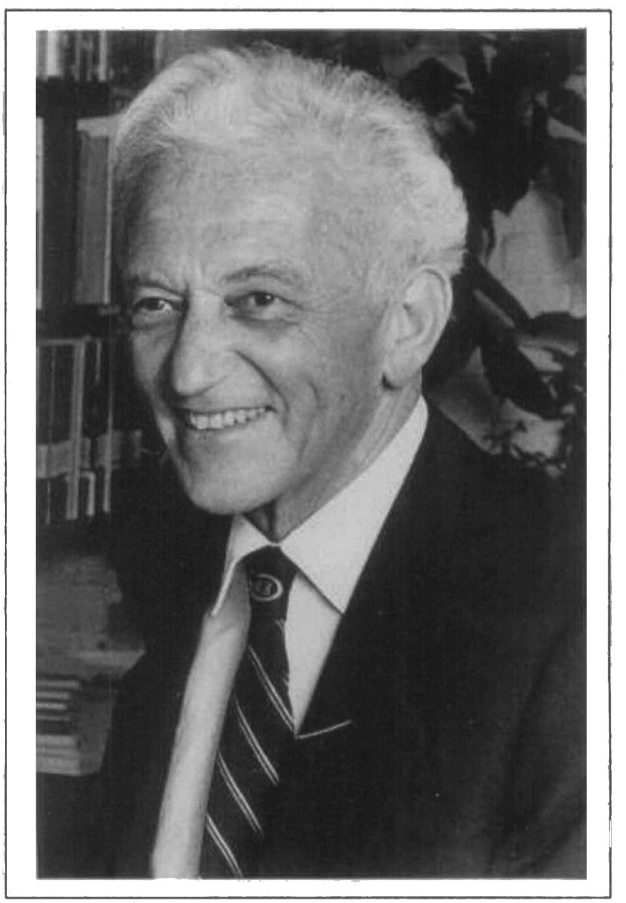
Peter Safar

12 April 1924 – 03 August 2003

Peter Safar: Physician, Scientist, and Teacher

Uwe Ebemeyer



Several weeks ago I was asked by Marvin Birnbaum if I would write a short article about Peter Safar. It should be an article about the person and not his scientific accomplishments. The latter would be endless, as most of the readers might know, Peter Safar wrote more than 1,300 articles, books, book chapters, and abstracts. So I e-mailed back to the Editor that I am honored with his invitation and that I would write my personal reflections. All of the readers of these notes who—like me—have had the privilege of having worked with him (and I am certain that most of you who have had the opportunity of meeting Peter Safar even if just once) will understand why this article is written with a very personal tone. I suggest that all others—especially those who might think that it is inappropriate to publish articles like this in an international, scientific journal—as you read more about this man, you will understand our intense feelings. To be honest, as I was going deeper into preparing these personal impressions, I thought again that it is difficult to write about Peter Safar in a way which describes adequately how unique he was.

The first time I saw Peter Safar was at the *Medizinische Akademie Magdeburg*. At that time, the East-German town of Magdeburg still was a part of the former communist block and it was deeply behind the iron curtain when Peter Safar visited Magdeburg on the invitation of Wolfgang Röse, who at that time was a member of the European Academy of Anaesthesiology's Committee on Cardiopulmonary Resuscitation. Peter Safar was talking in the biggest, but overcrowded, lecture hall on campus. At the podium stood an older, but extremely agile man giving a presentation about the modern aspects in cardiopulmonary resuscitation. The lecture was held in "wienglish" as he called it—a mixture of Viennese German and American English. Most of his slides were in old-fashioned black-and-white; a legendary tradition as I learned years later. The audience was astonished by his fresh and unconventional presentation. We were fascinated by the way he simplified and cross-linked the highly complex pathophysiology, and his vision about future directions of modern reanimatology. About halfway through his presentation, the most horrible nightmare for his hosts occurred—the slide projector broke. Peter Safar took out his Swiss Army Knife and started to repair the old, manually driven, slide projector. Why is this anecdote worth mentioning? Working and communicating with colleagues in eastern countries on a very collegial level was a normal academic behavior for Peter Safar. Since traveling from the west to the east was much easier than vice versa (for most scientists, the latter was absolutely impossible), he visited his colleagues in Moscow, Prague, Magdeburg, and other sites behind the Iron Curtain. His friendship and cooperation with Dr. Negovsky (Moscow) was legendary and was ground breaking especially during the years of the cold war. Peter Safar talked and pursued peace all his life.

For him, it was a life-long philosophy; he called himself a "world citizen". With the same engagement with which he developed an international network of cooperating scientists, he supported peace processes in his own country. Almost every US President learned about his humanitarian commitment; the White House received dozens of letters. Asked about his engagement for peace-keeping and humanitarian activities, he always said that these were the

https://doi.org/10.1017/S1049023X00002235 Published online by Cambridge University Press

only logical consequences of his personal experiences during World War II.

Safar was a master in unifying these three professions within one person. One of his basic philosophies was that, first of all, an academically interested physician must be a kindly, caring, responsible, critically judging, and state-of-the-art medicine practicing professional. This is one of the basic things a medical student must learn while in medical school, and that a physician must remind him/herself every time he/she faces a patient or is making a medical decision. In order to improve the practice of medicine, the best physician—independently of whether working or not working in an academic environment—also should be a scientist. Without science—the German word for scientist, "Wissenschaftler" translates into "someone who generates knowledge"—there would be no progress or improvement in medicine or any other aspect of human life. Being a scientist was one of his professions. A scientist, however, only is as good as his ability of transferring his newly assembled knowledge to others, and especially, the next generation of physicians and scientists. "Teacher" also was his profession. All together, Peter Safar was an excellent physician, a bright scientist, and a talented teacher. Managing all of his "jobs" simultaneously and at the same time being a good father and husband characterizes the life of Peter Safar.

Quite often, I have been asked how it was to work under the direct guidance of Peter Safar. First, there was a special spirit at the International Resuscitation Research Center (IRRC). Everyone at the IRRC (and everyone included everyone from the "boss" to the laboratory technician) was asked to give his/her personal opinions. Fellows were responsible for the projects, and were required to report progress during the weekly Friday "lab-meeting". These meetings were the pot in which new ideas were cooked together. Peter trusted his associates and gave them enough liberty for trials. Of course, in the end, he was the one in charge, but until he made the final decision, everyone was welcome to provide input to a question asked. So, one of his greatest talents was his ability to recognize, combine, and establish new ideas. His well-known masterpiece was the A-B-C resuscitation sequence. Each of the fundamental elements of the basic resuscitative procedures were known, but it was up to Peter Safar to assemble the puzzle pieces and to establish the life-saving ground work for the worldwide reorganized resuscitation procedure.

But, there are other examples. During the time I was an IRRC-fellow, we were trying a new approach to find outcome-improving, post-CPR interventions by combining the most promising single interventions being studied at that time into a "cocktail". Some "more traditional", single-intervention, research-propagating scientists criticized our approach because it would not be possible to discover what and why such treatments are effective. Peter Safar argued that our patients, who today are going into cardiac arrest, neither have the time nor are they really interested in knowing why a treatment works; but they do need an outcome-improving intervention now. So he proclaimed, that "if we can improve outcome with a combination of treatments when we can and should look after the best combinations tomorrow and then learn about their mechanism and improve them further." Peter Safar never accepted rigid thoughts. The ongoing Suspended Animation Program at the Safar Center is the consequent continuation of the originally unconventionally called "multi-cocktail" studies.

Today, the former International Resuscitation Research Center is called Safar Center for Resuscitation Research. Under the directorship of Patrick Kochanek, the former IRRC is continuing what Peter Safar began decades ago. The fellowship program still is an international, research-training project. The basic research topics still are the same—even if some of the methods and technologies have changed. And, the old Safar fellows still are welcome at 3434 Fifth Avenue. Most of the former Safar fellows still follow his way of being a physician-scientist-teacher. Every one of us can say that Peter Safar has changed our view of medicine and the way we handle our professional responsibilities. For myself, I can say that he is watching over my shoulder every day. His picture on my desk is a permanent reminder of how much responsibility we have for our patients and how important it is to have a critical, but open-minded position to new ideas; ideas which might improve the way we treat patients. I strongly believe that Peter Safar deserved the highest honor in medicine: the Nobel prize.

Peter Safar as Teacher and Mentor

Sam Tisherman
Safar Center for Resuscitation Research
Pittsburgh, Pennsylvania USA

It is indeed a great honor to be able to pay tribute to our friend, colleague, and mentor, Peter Safar. I would like to comment on what it was like to train with Peter. In doing so, I feel that I am representing all of us, for we were all his pupils.

So, what was training with Peter like? Training and working with Peter Safar was somewhat like trying to jump onto a runaway train. One quickly finds out, however, that this train has a mission and is under complete control. Let me tell you about this Safar train.

One of the most important cars on the Safar train was the *patient*. Regarding research, Peter was always more interested in improving patient care rather than discovering molecular, biological mechanisms. As he worked to develop better ways to take care of patients, he simultaneously considered and developed ways to educate the masses to implement the new approaches. To change the world, one can't just demonstrate that something works; one must make sure that it is being implemented universally.

After stepping down as Chairman of the Department of Anesthesiology, Peter continued to spend one morning a

week in the operating room working with the residents. This was a unique, challenging experience for the anesthesia resident who was in the hot seat with Peter looking over his or her shoulder. Peter was well-known for doing things like turning off all the monitors. Pointing to the patient's tongue, he would say to the resident, "here is your pulse oximeter". He would point to the carotid artery and tell them, "here is your blood pressure and heart rate monitor". The patient was the focus of his educational efforts. He was able to push trainees to their limits, safe in the knowledge that he could handle anything that might arise.

Collegiality was a critical car on the Safar train. At the beginning of my comments, I referred to training 'with' Peter and not 'under' because he treated everyone as a colleague. From the department chairman to medical students to laboratory technicians, everyone was important. Life was a two-way street. We all were present to learn *with* him. In return, he knew that we all were vital members of the train crew, working toward common goals. He respected all opinions and perspectives. To maintain the team spirit, he and his wife, Eva, graciously hosted many social events for various colleagues at their home.

One of the cars that powered the train was the *curiosity* car. To Peter, the whole world was a laboratory for the train passengers to study, explore, reflect upon, and challenge. He epitomized the quest for life-long learning and taught by example. He could just as easily ask basic scientists about mechanisms of ischemic neuronal damage, ask a musical expert to critique the most recent symphony concert, or ask a taxi driver details about the history of the Great Salt Lake.

The curiosity car was closely linked to the *well-rounded person* car. Peter enjoyed talking about issues outside of medicine. Many of his colleagues had the opportunity to drive with Peter to meetings. Peter's driving was the tangible side of the runaway freight train analogy. Speed limits, like physiological limits, meant little to him. Throughout the drive, however, Peter would discuss music, history, politics, religion, and many other topics, but very little science. Whatever the subject, Peter, the teacher, had a point to get across.

Controversial topics also were frequently discussed in lab meetings. These meetings were held in the *creativity* car of the Safar train, which also may have been called the *wine bar*. Peter believed that people have a chemoreceptor for red wine that needed an appropriately titrated level in the blood to stimulate creative thought. He routinely opened a bottle of red wine for the meetings.

"You're as young as you feel" could readily be said of Peter. The Safar train had a *perpetual youth* car. At the age of 76, while at a meeting at a ski resort, Peter decided to try mountain biking. Despite a tumble over the handlebars, he kept up with technicians less than half his age. Even when Peter was ill at the age of 79, he still stated that he had more work to do.

The most important aspect of riding the Safar train was that, once you were onboard, you never left. Peter kept tabs on former trainees and colleagues. One moment he could be scribbling comments with his infamous blue marker on a manuscript, the next, taking a phone call from a colleague in Japan, and the next, responding to an e-mail from a former fellow in Austria. He diligently sent scribbled birthday notes to many colleagues and friends around the world.

Research was always a team sport to Peter. When discussing research, Peter always used the word 'we' and made a point of naming the colleague who had conducted the experiment.

The Safar train had no caboose. The seating capacity of the train was unlimited. Anyone with the will to jump on was welcome. Though trains usually have conductors, I think that Peter would rather have thought that his train was run by everyone on board. Peter used to describe surgical procedures as chamber music. He felt that all the participants should do their parts and they should be able to make beautiful music together without the need for a leader. In contrast, the typical surgeon views an operation as a symphony, of course with the surgeon as the conductor. Peter was the master of creating chamber music in the lab, in the clinic, and even in his home (he was a exceptional pianist).

The Safar train continues to speed along the tracks with all of us on board. Peter's teachings keep the train on course and, as Peter's laws state, "it's up to us to save the world."

A Giant in Many Ways

John Cook Lane, MD, FACS
Professor of Surgery
University of Campinas
São Paulo, Brazil

Peter Safar was a giant in many ways, and in so doing, he became immortal.

He knew about the poor, the rich, and the powerful, but was still curious. One time upon leaving the São Paulo airport from one of his many visits to Brazil, he wanted to know why there were so many people living under the bridges.

On his 70th birthday party in Pittsburgh, he knelt to the floor to kiss a young girl who had traveled many thousands of miles to hold his hand for a moment.

He was a genuine humanitarian who enjoyed teaching and training physicians in Peru, Brazil, Argentina, Chile, and around the world. These trainees, in turn, became teachers and taught others in their respective countries.

He was, above all, curious, continuously asking questions and taking notes on small pieces of paper bound by a fancy rubber band. He made sure that jokes were duly recorded as well. His left wrist always carried loosely attached rubber bands. It took me years to find out that each rubber band was to help him remember something that had to be done that same day.

He loved to play the piano and was always ready to sit and play. In the evenings, he would play for his friends and enjoy a glass of red wine.

He was also a sportsman. He enjoyed hiking and water and snow skiing. Once in Brazil, he insisted he could slalom and after many falls he proved he could still do it. He did not like to give up.

In Patagonia, he decided he could climb a rather high mountain. Even with strong winds and after everyone had turned back, he made it to his goal. He also enjoyed glid-

ing and found it a beautiful sport. (Remember about the airplane over the Andes... "pull up, pull up").

He became immortal in many ways; he walked the unbeaten path, found new ways to save lives, and showed total honesty in all his endeavors. Hard work was a part of his ethic. He wanted to leave this world better than he had found it.

There is a tree that he planted in central Brazil. It was only a few inches tall when he put it into the ground. A forest has been planted around that tree, but when I look at it today against the blue sky, it surpasses the others around it. To me it symbolizes the continuation of Peter's life as it soars above the others. The tree now seems to look high into the heavens looking for its master.

Memories of Dr. Peter Safar

Sadao Morikawa, MD, PhD

Honorary member, Japan Society of Anesthesiology

I was an Anesthesiology resident at Baltimore City Hospital in Maryland from July 1958 to June 1961 and an Intensive Care Unit fellow at the University of Pittsburgh from July 1967 to June 1969, both under the direction of Dr. Peter Safar.

After graduation from medical school and a one-year internship in Japan, I received the Fullbright Travel Grant to study in the United States. I decided to study Anesthesiology, since there were no doctors specialized in anesthesiology in my medical school at that time. I took another internship at the University of Wisconsin Hospital in 1957 and hoped to do my residency in anesthesiology at this hospital. However, the chief of the department, Dr. Sidney Orth, said that because of the shortage of anesthesiologists in the United States, he would not be able to offer the position to foreign graduates for two years until after training American doctors first. Then, Dr. Orth kindly wrote letters of recommendation to several medical centers and I received several offers. The letter from Dr. Peter Safar was so impressive that I immediately decided to go to Baltimore.

When I was in Baltimore, Dr. Safar was very young, around 30 years old. He was very aggressive, innovative, and energetic, working day and night. He was very kind to the foreign graduates, since he himself had emigrated from Vienna, Austria.

During the five years I worked with Dr. Safar, I have many memories, among them, three things are remembered most vividly.

There was an outbreak of polio in Baltimore around 1960. There were only two tank respirators in the City of Baltimore and sometimes 10–15 patients in the Baltimore City Hospital at one time. Upon Dr. Safar's innovation, patients were tracheostomized and ventilated by Morch piston respirators. Residents who were on-call invariably were called many times during the night. Through these experiences, we learned many things such as infection control (sterile techniques), tracheostomy care (cuffed tracheostomy, cuff pressures), long-term positive ventilation, position change, and how to wean patients from a ventilator. I firmly believe that no other doctor had more experience with long-term, positive pressure ventilation at the time than did Dr. Safar.

It was necessary to get human data demonstrating that mouth-to-mouth respiration is better than classical external chest compression. Because of the configuration of the chest, the data available on dogs were not applicable to humans.

With special permission from the state medical board, we hired medical students for these experiments. They were explained the details and risks and agreed to participate.

Emergency squads and laypersons attended lectures about mouth-to-mouth ventilation. With many monitors attached, the medical students were anesthetized and paralyzed with muscle relaxant. Then, people were asked to try mouth-to-mouth respiration one-by-one. I was always next to the subject medical student and after each try, I ventilated him or her with 100% oxygen.

This was quite a risky experiment, and I was scared the entire time. However, with these human data, Dr. Safar firmly established the superiority of the mouth-to-mouth method and the importance of keeping open airways.

Since the advent of closed chest cardiac massage by Dr. Kouwenhoven around 1960 at Johns Hopkins Hospital, open chest cardiac massage has been performed rarely.

Dr. Safar wanted to obtain data, which were more effective concerning blood pressure and carotid pulsation. With terminally ill patients, we inserted arterial and central venous lines and monitored the patients continuously. The moment patients expired; we performed closed chest cardiac massage, and then open-chest cardiac massage. Some patients only received open-chest cardiac massage.

Open-chest cardiac massages were slightly superior in regards to blood pressure and carotid pulsation. Both methods were thought to sustain brain circulation since dilated pupils became smaller in most cases. However, it is most important to regain the patient's own heartbeat as soon as possible to provide meaningful brain circulation.

With so many resuscitation attempts, Dr. Safar finally reached the conclusion that the most important process is brain resuscitation. He then vigoroursly started the research concerning brain resuscitation.

I am so happy and fortunate that I could spend my young years with Dr. Safar. I learned so many things, including not only anesthesiology, resuscitation, and long-term artificial ventilation, but also the process of medical research and how to write medical papers.

My family and I were also very thankful when he sent us his concerns and comforting faxes soon after the terrible earthquake in Kobe City in 1995.

Thank you again Peter.

Life after Meeting Peter

Carol J. Spizzirri
President/Founder
Save A Life Foundation (SALF)
Schiller Park, Illinois USA

Labor Day, 1992, my daughter Christina died as a result of a hit and run auto accident while driving home from work. Those first at the scene were police officers who were not trained in life-saving skills and who could not render aid to her wound, but waited for the emergency medical service (EMS) team to arrive, which resulted in Christina bleeding to death.

As a registered nurse, I was able to understand the terminology related to her injuries within her medical report, which concurred with my suspicions that simply applying pressure to her wound could have saved her life. This evidence was presented to the Illinois State General Assembly, which was instrumental in the passage of a state mandate for all police and firefighters to be trained in First Aid and CPR prior to graduating from their academies, and the passage of a federal appropriation bill to pay for that training.

Days after my story was made public in 1993, I received a phone call from Peter Safar, who explained his enthusiasm to meet me the following week in Chicago. He explained that he too had lost a daughter, which changed his life. He went from being an Anesthesiologist for the youngest Chief Surgeon at Philadelphia's Children's Hospital, to a researcher in developing cardiopulmonary resuscitation (CPR). He also told me how he urged all first-aid promoters not to separate cardiac arrest from asphyxia from trauma, but to promote Life-Supporting First Aid (LSFA), which includes all of the elements and skills necessary in maintaining life until advance care arrives.

It was a brisk August morning in 1993, at a hotel coffee shop in Schaumburg, Illinois, not far from my home, where I sat awaiting his arrival. A gentle looking man with tossed white hair, dressed in a gray suit, much larger than his slight frame, appeared from across the room. I wasn't expecting someone quite as humble, nor did I know that he had already determined my life's work. He smiled as our eyes met and I rose to shake his hand, but instead of extending his arm, he pulled a camera encased in a plastic bag from his suit pocket, and took my picture. I later discovered that this was his typical ritual. I wonder where all those pictures are today.

In our coffee shop meeting, he told me about his migration to the United States from Austria and explained why he chose to work with dogs (because the sexual behavior of monkeys was far too similar to humans making love). He reminisced about his beginnings in CPR, his dream to train the masses in Life-Supporting First Aid (LSFA), and his disappointment with those he had depended on who had failed. He embraced my belief that, "teaching these skills should include hemorrhage control and be a basic." He added, "LSFA knowledge is owned by the public, not by any one organization and progress in reaching the masses will be made by teaching more than guidelines."

His gentle blue eyes seemed to penetrate my mind in sameness as his words penetrated my ears: "I want you to take over my LSFA efforts, so I can go back to research" he said. Drawn back in my chair, he assured me he would assist my every step and protect me. I took a breath of disbelief as he explained how others had tried unsuccessfully. He was especially saddened as he told me of a Chicago woman who lost her child years before and had challenged the system to bring these skills to the masses with much resistance. He directed me to consider the task and if I accepted, I would need to promise not to fail him as he would not fail me.

Later that evening, still pondering our meeting, I discovered the acronym for Life-Supporting First Aid (LSFA) that Peter described, were the same letters within the acronym for Save A Life Foundation (SALF). I had experienced many unexplained occurrences since the death of Christina and took this as another and agreed to accept Peter's offer the following morning when he called.

From the confines in my home office, I began drafting course materials to train school children using an age-appropriate method, based on the needs described in the National Highway Traffic Safety Administration's "National Standard Curriculum for Bystander Care", a publication that duplicated Safar's name many times within its bibliographies. Peter and I shared numerous calls and faxes until we agreed to meet at an Emergency Cardiovascular Care Update (ECCU) Conference in Montreal, Canada for his final approval.

Peter had long known of my established relationship with Dr. Henry Heimlich and never judged my enthusiasm to have Henry as part of our medical team. He graciously accepted my conviction of using the concept for dislodging an obstructed airway with the term "Heimlich maneuver" with a shake of his head in disbelief and sternly stated, "You are incredible", knowing too well it satisfied the public's understanding even though I sensed a friction between the two men. Later, I was told that the pair had never worked together on any issue except SALF.

Peter spoiled me like a father spoils his first-born. Without warning, he'd fax me correspondence he had written to fellow prominent colleagues to heighten their awareness and his satisfaction of SALF's LSFA work, like the proud parent I had longed for throughout my youth. Peter had a wit of applauding someone's deed, while disagreeing with his or her actions within the same sentence. Yet, he never criticized me, but availed himself whenever I called to hear a friendly voice.

At Peter's 70th birthday party celebration, it was apparent he had gained the love of hundreds of colleagues from around the world, yet I was invited to sit amidst his lovely wife, and his sons and their wives as an exclusive part of their family.

I sit here with volumes of file folders scattered across my desk, filled with faxed letters and handwritten notes, manuscripts, along with autographed books and personal pictures from Peter adoring my walls, trying to capture memories of how this one man changed my life into written words. I just can't!

My fondest memories include conversations we had related to his favorite subject, "Exposure or Suspended Animation" and the time he called my home in 1995 to summon my daughter Ciprina (who was 16 at the time) and me to Pittsburgh to witness this discovery first hand. We watched in amazement as he walked us through the corridors of the Safar Center for Resuscitation Research while describing each stage of this study on two dogs now "Suspended" for forty-five minutes.

Or when we shared dinner before attending the Philadelphia Symphony. Or the times he would stimulate colleagues during champagne-style meetings and sway their views to reflect his. No one could really say "no" to him anyway with or without champagne. Or the frequent calls to follow-up on the status of my oldest daughter Carlotta's health, who was battling Lupus until her death one year prior to Peter's passing. Peter researched her case with physician friends while selfishly hiding his own battle with cancer and the pain he endured. Or the time when Carlotta lay in a Chicago hospital bed with blood oozing from every extremity, upset that she wasn't being cared for properly, and he phoned the hospital administrator to have her moved to ICU from the confines of his bed after recovering from his own surgery. Or our last dinner together when Peter invited Tore Laerdal and other distinguished guests before meeting the following morning to appoint Dr. Steve Orebaugh as SALF's Pennsylvania Medical Chairman, thus assuring SALF's likelihood of survival in his beloved state of Pennsylvania.

My devotion to Peter is as strong as ever, and I continue to feel his presence even from the other side. Yes, he spoiled me, but he spoiled everyone with his belief in them, his gentle compassion and willingness to father those in need. His wife and children strengthened him throughout his obsession to save others. And during those numbered days when the beginning of the end was near, they strengthened him with added days until he was convinced those he chose were able to continue the tasks meant for him here on earth.

I miss our phone conversations, e-mails, faxed notes, and his wisdom, and just knowing he was only a phone call away. I can't express my personal loss more eloquently than to quote Peter's sentiments in the passing of Asmund Laerdal:

Thoughtful friend from across the sea,
Your body no longer feels pain.
Yet some of it lingers deep within me,
For I'll never see you again.
I'll miss your laugh, your twinkling eyes,
The talks that often we had.
Your soul and body have now found peace.
Forgive me for feeling sad.
For there's anger within and confusion, too,
Why such a kind man must die.
So many with seemingly less value here
Still live, and I can't explain why.
Man's body may lie in a cold, dark grave,
And it seems as if he's gone.
But the lives Peter touched in this troubled world
Will see his work carried on.
We are links in the chains, some strong, some weak.
What counts is the overall plan,
Just how we lived our life on earth
And treated our fellow man.
For some death comes as an enemy,
To others a welcome friend.
The love Peter gave to all he knew
Means his life will never end.

N. Krimli (in Peter's name)

Peter Safar: A World Federalist

Burkart Holzner
Distinguished Service Professor of International Studies, emeritus
University of Pittsburgh
Pittsburgh, Pennsylvania USA

Peter Safar was an innovator and leader in critical care and resuscitation medicine. His contributions to medical knowledge and techniques have extended the lives of innumerable people, and his name is known around the world. He also was a World Federalist, outspoken in his views that working for world order under law and with respect for human dignity and rights was a demanding and necessary moral obligation for him and a duty for all humanity. He expected our leaders to understand this moral obligation. When he found that they did not—which often was the case—he never hesitated to write letters to Presidents, Prime Ministers, and newspapers to admonish them and to express his views.

Among Peter's "Laws for the Navigation of Life"—his unorthodox code of conduct that gave many bureaucrats fits of exasperation, but often led Peter to success in spite of them—is Law 22, which says, "It is up to us to save the world." And he meant it. He also said in Law 15, "Bureaucracy is a challenge to be conquered with a righteous attitude, a tolerance for stupidity, and a bulldozer when necessary."

He knew first hand that the world is a dangerous place. He was convinced that scoundrels and killers needed to be dealt with by force if necessary. He was a World Federalist,

but not a pacifist. Military intervention was, for him, a necessary responsibility for democratic powers to stop genocides and civil wars. He took a great interest in the United Nations; at times, he was angry at its slow pace of action. He hoped for effective reform of the United Nations.

Peter Safar's experiences during the Nazi regime and World War II undoubtably had something to do with his commitment to fight the horrors of totalitarianism and war. He despised the Nazis and their war with a deep passion. After his high school years, he was put into a Nazi labor camp digging ditches. During the war, Peter Safar narrowly escaped becoming "cannon fodder" by being drafted into the German army and was almost sent to the Russian front. Safar avoided that fate by using imaginative and dangerous medical treatments on himself to be classified as "unfit for military service". For a time, he worked as a part-time paramedic and as a nurse for burn victims from the war front. He entered medical school in Vienna in 1943.

These experiences and his need to create an international network of critical care medicine and resuscitation research and technology made Peter Safar a citizen of the world. He saw the Earth as the common and unique habitat of all humanity, and felt obliged to do what he could to advance the ideas of world law and justice.

He was a very active member of the World Federalist Association of Pittsburgh (WFAP), serving on its Governing Board and Executive Committee. The WFAP is a distinguished local organization founded more than a half century ago. It is well established in the Pittsburgh community and supported by generous endowments. The Chapter is part of the worldwide federalist movement. Peter Safar insisted that WFAP be a clearly focused organization, sticking to its special charge and mandate. He spent a great deal of time on matters of program, financing and actions, and advanced WFAP's cause. By now, WFAP and the World Federalist Association of America have changed their name to "Citizens for Global Solutions." They have adopted a very active program to intervene in public debates and government decisions. Citizens for Global Solutions makes strong efforts to educate the members of Congress on the real needs for a world order based on law and justice. Peter Safar, we think, would be pleased with this turn of events.

Witness to a Wonderful Life

Ernesto A. Pretto, Jr., MD, MPH

I had the distinct honor and privilege of being a friend of Peter Safar. I worked closely with him for more than 20 years. During this time, my formative years in medicine, Peter had a profound impact on my professional career and personal life.

As a friend, his devotion and loyalty were absolute—he never wavered in that friendship. As mentor and teacher, he was inspirational and supportive. At the time I met Peter, he already was fully engaged in his life-long struggle with the grim reaper. He sought not to conquer death, but, to reclaim from him, as he put it, those individuals with "hearts and minds too good to die."

On a personal level, I witnessed a man who was thoroughly committed to family. However, he felt compelled to devote much of his time towards improving the human condition. I came to know him as a man of great courage, who accepted no limitations, and, when necessary, took great personal risks to achieve his objectives. A privileged son of prominent physician parents who was educated in the classical tradition of the Austrian gymnasium, he never exalted himself. He was humble and lived an egalitarian life. His principal preoccupation was the pursuit of knowledge in all fields of human endeavor. He was a self-described agnostic and humanist. He was not dismayed by world events, but actively engaged world leaders to attempt to change the status quo—striving for the betterment of mankind through the advancement of science and peace. He redefined the term "Renaissance" man—father, husband, physician, teacher, scientist, administrator, statesman, philosopher, pianist, human-rights activist, dancer, world traveler, mountain climber, an expert water and snow skier, and superb host in the European tradition. Often with great personal sacrifice and loss, he stood face-to-face with the darker side of humanity, yet never lost his love for or faith in the goodness of every human being. Peter enjoyed the simple things life has to offer—a fine wine, waltzing with his lovely wife, Eva, skiing in the Swiss Alps with sons Philip and Paul, a Mahler symphony orchestrated by the Pittsburgh Symphony Orchestra, or playing the piano. He was charming and engaging.

When I first met Peter in 1983, he already was famous for having initiated cardiopulmonary resuscitation in the 1950s and 1960s, Critical Care Medicine in the 1960s, and Emergency Medicine in the 1970s. He readily handed these initiatives over to others to develop; he was satisfied with his role as an initiator and innovator.

Despite all of these accomplishments, his notoriety and fame escaped me before I arrived to Pittsburgh to do a critical care medicine fellowship. Upon our meeting, I realized that he was like no other physician I had encountered in my career—willing to discuss not only medicine, but politics or religion. I decided to commit to a 4-year stint with the US Navy in order to have the option of working one year with him. I never have regretted that decision.

He recounted the discovery of "artificial respiration". He did not 'rediscover' the idea of mouth-to-mouth ventilation or, as it was known in the 1950s, "rescue breathing". He proved in a series of well-designed experiments using human volunteers, that it was far superior to the chest-pressure arm-lift method of "artificial" breathing prevalent at the time. In fact, the idea of using expired air ventilation or rescue breathing belongs to James O. Elam, also an anesthesiologist. Peter related that Elam and he embarked on a cross-country trip on the way back from the 1956 American Society of Anesthesiologists meeting in Kansas City. Elam described his own experiences during the Minnesota poliomyelitis epidemic of 1946 and how he, out of frustration and a sense of helplessness, attempted to save the life of a dying child with polio-induced ventilatory fail-

ure by blowing expired air directly into the endotracheal tube. Elam also described his work with mouth-to-mask ventilation, which had appeared in the New England Journal of Medicine in 1954. Perhaps, Elam, may have remembered reading a similar account in the Bible, in the Book of Kings, where the prophet Elisha places his mouth over the mouth of a young boy and brings him back to life, hence the 're'-discovery. During this fateful trip, they spent two days engaged in an intense debate on the significance and potential of mouth-to-mouth breathing. Peter conceived of the seminal study that appeared in the American Journal of Physiology, which described the mechanism of airway obstruction in unconscious patients, and presented anatomic evidence for how to overcome upper airway obstruction by manipulating the head and jaw (head tilt, chin lift, jaw thrust) to ensure patency of the airway—the" triple airway" maneuver.

I believe Peter related this story to me to illustrate what Einstein also believed—"Genius is defined not in the ability to conceive a new idea or concept, but rather, in translating the idea into a tangible benefit for mankind." This, he certainly did, and it was one of the most important lessons I learned from Peter. There were many more.

In the early 1970s, Peter became involved in the civil rights movement in Pittsburgh. Peter was responsible not only for establishing the first ambulance service manned by trained ambulance attendants in the city of Pittsburgh, but did so with so-called "unemployable blacks" recruited from Pittsburgh's impoverished inner city Hill district neighborhood. Armed with a federal grant, Peter empowered a group of poor, young, black men, for whom society had given up, and equipped them with the confidence, knowledge, and skills needed to succeed as emergency medical technicians. Despite tremendous political pressure coming from the highest levels of the white establishment in Pittsburgh, who wanted to see the 'Freedom House Ambulance Service' fail, it proved instead a resounding success. By so doing Peter proved what faith in another human being can achieve.

During the period I worked with Peter in the laboratory, there was tremendous scientific activity at the Resuscitation Research Center (RRC), a laboratory 'without walls' as he called it, which he founded and later renamed the International Resuscitation Research Center (IRRC). It was a scientific 'Never land' visited by some of the world's most fascinating thinkers, such as Manhattan project physicists Hans Bethe, Victor Weiskopf, Freeman Dyson, world renowned scientists such as Thomas Hornbein, Bo K. Siesjo, John Severinghaus, Vladimir Negovsky, Max Harry Weil, William Shoemaker, and Bernard Lown, US Presidential candidate John Andersen to name but a select few. To say the least, it was energizing and highly stimulating just being there. In 1994, when Pat Kochanek assumed leadership of the IRRC, he aptly renamed it, the Safar Center for Resuscitation Research.

Peter's greatness resided not only in his unusually prolific talent as a scientist, physician, anesthesiologist, emergency medicine and critical care specialist. He is a legend in the operating rooms and intensive care units of Presbyterian University hospital in Pittsburgh. His greatest asset was his ability to spark enthusiasm ('turn on') in others. He also had an immense humanitarian spirit and faith in the future of mankind.

In the field of politics and current events, Peter and I shared more than a casual interest. We had many political conversations and together attended meetings of the Pittsburgh Chapter of the World Federalist Organization. I can say that he truly and honestly believed the best hope for lasting peace in this world was mankind itself. And, the way to achieve world peace was through the rule of law and humanism. In this regard, he supported World Federalism (world peace through world law), Physicians for Social Responsibility (PSR), International Physicians for the Prevention of Nuclear War (IPPNW), and the United Nations movement. The World Federalist Organization awarded him their prestigious Norman Cousins award for peace activism. He considered himself an internationalist and world citizen. He believed one individual could change the world for the better. As such, he frequently expressed and exchanged views on political issues with world leaders.

My friendship with Peter Safar greatly enriched and blessed my life in many ways. I miss him dearly. Under his tutelage and guidance I matured as physician, scientist, and person. His enthusiasm for science and belief in mankind made me realize that, as physicians, we are called to be humanitarians. As such, we have a special mandate not only to protect life, care for the sick, alleviate pain and suffering, but also aid the oppressed, and work towards the goal of achieving peace and mutual understanding in this world. This is Peter's legacy to all of us. Peter's life was a wonderful and rich life. I felt privileged and grateful to have known such a great man.

The Day Our Music Died ...

Charles Brindis, MD, MS (Computer Science)
Pittsburgh, Pennsylvania USA

The dictionary defines music as (I'm paraphrasing):

> *The science or art of ordering tones or sounds in succession, in combination, and in temporal relationships to produce a composition having unity, continuity and beauty.*
> *An agreeable sound.*

Dr. Peter Safar passed away on 03 August 2003. Yet his life's "music" lives on. Peter's music encompassed two worlds, that of classical music and the music of his medical research.

Peter's brilliant, groundbreaking research saves millions of lives. In a way, his contributions were musical—bringing order and harmony out of chaos. His "composition" was Life, bringing continuity and beauty to lives threatened by catastrophic illness. The results of his research were, in the loftiest sense, great music.

Peter's life-long love of classical music and music-making continues today. Peter and I met at a Department of Anesthesiology Christmas party in 1994. My wife, Debra,

and I found ourselves seated next to an elderly, elegant-looking couple. After the usual introduction and exchange of pleasantries, we anticipated a polite, but dull evening ahead. Much to our surprise, we found ourselves immersed in deep conversation with the Safars (the name meant little to us at that time). Almost immediately, the subject of music and the music of Gustav Mahler arose. I discovered then that Peter (like I) was a very serious amateur classical pianist. We decided then and there to get together and play duets.

Our first get-together went so well that Peter and I decided to invite friends for some Haus-Musik: Music first, then a "little"—a favorite expression of Peter's—bite to eat.

Over the years, this one event blossomed into a wonderful series of chamber music soirees encompassing a wide range of musicians, instruments, and vocalists (both professional and amateur). Rotating hosts invited a variety of musicians and their music-loving friends to an evening of delightful music, gourmet food, wine, and camaraderie.

When Peter and I played together, as we often did for these events, Peter always chose the most difficult duets. The music ranged from Mozart sonatas to Dvorak's *Slavonic Dances* to Bruckner symphonies and Schubert's *Fantasia in F Minor*. Peter had a great affinity for the Viennese composers, and we always had great fun putting our soiree contributions together. Many a Sunday afternoon was spent at the Safar house struggling through these difficult pieces in preparation for an upcoming soiree, while Debra and Eva (Peter's wife) listened from an adjoining room. Invariably, though, after some time spent at the piano, our musical forces would align and we would achieve some great musical moments.

In true Viennese fashion, these practice sessions always were followed by a "little" dessert pastry, wine, and coffee served at a perfectly appointed table dressed with Viennese china and linens. Conversation ranged from music to world events, and eventually, to politics.

Part of Peter's genius was in making whomever he was with, the center of attention. He never tired of complimenting me and my piano playing, but never once mentioned his own great accomplishments, whether musical or medical. Modesty was a great trait he had, and those around him were enriched because of it.

On 03 August 2003, I lost a dear friend, music partner, and mentor. While my sense of loss is great, the loss to humanity is even greater. On that day, the world not only lost a fine classical musician, but a great musician and composer of cures as well.

Today, Peter's "music" lives on.

It lives on in his son, Paul, who is both a musician and composer, and in his son, Phil, who also has inherited his father's love of classical music.

It lives on in the continuing soirees, first inspired by Peter in 1994.

It lives on in the ongoing research by the Safar Center and in all the young men and women that Peter inspired and mentored over the years.

Peter was a true composer and musician in every sense of the word. We will miss him.

Peter Safar: Model Humanitarian

Ed Ricci

For more than 30 years, Peter Safar had been for me the perfect model of how to integrate deep humanitarian concerns within a professional domain of work. Knowing his remaining time was very short, and not wanting to intrude into time he was spending with family, I prepared and sent him the following letter approximately one month before he passed.

Dear Peter:

Excuse the formality of a typed letter; my handwriting is not particularly legible, so this will be easier to read. Lately, I have been thinking about you often as I am planning a major transition in my life, similar to but not of the magnitude that you made when you gave up the Department Chairmanship to become the Director of what turned out to be a fantastic intellectual center.

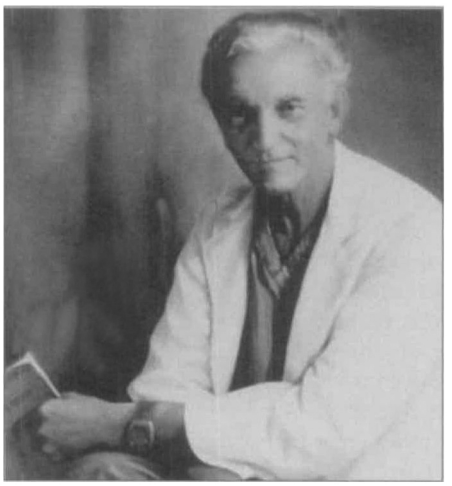
It appears as though we have succeeded in identifying the person who will serve as the next Chair of my Department... You would like him because he spent the first 30 years of his life studying the violin, preparing to be a professional musician. During that period, he obtained a Masters degree in Chinese Art History. He then changed direction and came into the world of public health...

Sometime in the late Fall of this year, I will transition out of the Department Chairmanship to become the Director of the Institute for Evaluative Science in Public Health. This is a new organization that I am creating. The Institute will have the multiple goals of advancing evaluation science, teaching and spreading evaluation science nationally and internationally and conducting evaluation studies.

It seems that in many of the decisions I am making presently, and have made over the past several years, I find myself asking the question: "How would Peter have handled this?" or "What would Peter do in this situation?" You have been a far greater influence in my professional and personal life than you can possibly imagine. Your admonition to your colleagues to ground their upbringing as the eldest grandson of Italian immigrants who was taught to take care of the "family" defined in the broadest sense to include both biological and personal relationships.

At any rate, although no one could do what you have done as well as you have done it in building and pursuing your professional goals from a strong base of humanitarian values and societal concern, I have certainly been inspired by your example and have tried to follow the lead which you have so clearly and capably provided. Hopefully this new Evaluation Institute will promote the values that you have espoused. I will continue to ask, as I pursue this final phase of my professional career: "How would Peter handle this?" "What would Peter do in this situation?" I am confident that your guidance will always be with me and I promise to make socially responsible choices while trying to use public health methods to advance the human species toward a more civilized condition.

Take care,
Ed Ricci



Within three days, I received a telephone call from Eva Safar. She inquired as to the availability of my wife and I to have supper with Peter and with her on the coming weekend at a local restaurant. We were delighted and I accepted immediately. During this final social call, we found him fatigued from the treatment he was undergoing but as our discussion moved across numerous social issues he never wavered from his passion to improve the world so that "...no one should die before their time". There was no doubt that this vision was the central and driving theme of his amazing life until the very end.

[Editor's Note: This is the text of Dr. Safar's last address.]

Thoughts about Académe and Humanism

Peter Safar

28 February 2003

Chancellor Nordenberg, Provost Maher, Vice Chancellor Levine, members and friends of our Pitt family:

Thank you for this undeserved honor, which came as a surprise.

Thank you for the opportunity to share with you some of my biases about "académe and humanism." These biases come from my 60 years in university environments, 42 of them at Pitt.

Congratulations to the students, faculty, staff, and relatives who are being honored today in recognition of their support of our fine University's *quest for excellence.*

Some of you probably consider a future in académe—as teachers, investigators, service givers or leaders. Imagine yourself being 80 years old, looking back at your life, pondering its meaning. Life in the free world is an individualized mix of contributions and enjoyment. The late Victor Frankl, Viennese psychiatrist, philosopher and holocaust survivor, taught us to seek satisfaction by searching for meaning in one's life. Many have found such meaning in universities where humanism can flourish.

Académe

Académe has a variety of meanings. Scholarly academies started with Plato's school of philosophy and continued to promote various fields of knowledge, in America since Benjamin Franklin's academy. Scholars have promoted humanism best where they mingled with students in universities, which started about 1,000 years ago in Cairo, Bologna, and Paris, followed by Austria, Germany, Scandinavia, the United Kingdom, and in America since the 1700s. Although some liberal arts were taught in Western Europe since the Middle Ages, it was the Renaissance that changed the emphasis from religion (thinking about God, sins, suffering, and death) to exploring the joys of human life. Universities have been appreciated for fostering broadly based education, which could lead to greater influence through knowledge.

Enormous changes have occurred in académe since World War II. We should not be afraid of, but contribute to, the positive changes, while holding on to the good of the past.

Among the *values* of academic life, *academic freedom* is on top of the list. It is the seat that holds together the three legs of the stool of académe, namely teaching, researching, and giving service. Teachers should have freedom in *what* to teach *whom* and *how*, what to investigate, and what to publish. This freedom is so important because often directions, documentations, and discoveries may not agree with currently accepted ideas and values. Rather than spoon-feeding students with *one* opinion, students and teachers should encourage critical thinking. Although founded in German-speaking countries in the 1700s, these ideals have flourished best in America. Academic freedom has been threatened, as for example in the murderous dictatorships of World War II. Thanks to the survival power of Jeffersonian democracy, academic freedom quickly revived and flourished. Academic freedom is a privilege. It must not be abused.

Other values of academic life include historic perspectives; making philosophy, ethics and history part of almost every subject's studies; interdisciplinary brotherhood; and teachers and students learning from each other and thereby becoming links in the chains of human evolution.

Humanism

Humanism also is defined in several ways. Before World War II, in my native Austria, the term humanistic education meant years of high school (gymnasium) with emphasis on Latin and ancient Greek. Although I have forgotten most of it, an appreciation of antiquity remained. We also learned the sad fact that throughout history, creativity and brutality have existed side-by-side.

"Humanism" is more the Greek and Latin. It should mean all that focuses on the goodness in Homo sapiens, ranging from the sanctity of human life, to an appreciation of the humanities. These include history, languages, literature, fine arts, music, and philosophy, the social sciences, and the physical sciences. Medicine is a mix of art and science. *Excellence* in professional schools is promoted by the humanities, which make life exhilarating. I remember amateur music in my physician parent's home, and my professor of medicine in Vienna having founded a physicians' orchestra. At the Johns Hopkins Medical Institutions, a group of physicians and students founded similar pro-

grams, believing in the power of the arts to lift the human spirit and to make us all better people. At Pitt, we have enjoyed music, the arts, and history lectures in medicine. We are looking forward to the programs planned between Pitt and the Carnegie.

Specialized trade schools are important, but adding general knowledge of our heritage can make life richer in non-economic terms. It helps you see on the horizon, a broad goal for your life. My physician parents suggested: "Make use of your talents and opportunities to help others;" and "help building on the edifice of mankind." That takes more than becoming a successful specialist. A supportive partner for life, true friends and children, who share the same values, can make one's contributions strong and lasting.

Research

Research now enjoys more support and recognition than teaching does. I am awed by how well informed our young colleagues now are. For medical students who ask me for advice on which specialty to select, I suggest that they first decide on a life in académe versus mainly in clinical practice. Although competition is now greater than it was in the 1960s, there are also now more opportunities for success in focused research. Arousing early interest in the wonders of nature and life saving, will help us to rescue the clinician-scientists, who are vanishing because of the commercialization of medicine.

Excellence in research depends on the importance of the topic and of the results. In the health sciences, research includes pathophysiology and therapeutics, but also delivery and education research.

Today, we also honor Fred Rogers who gave sound foundations to millions of future students. Erring is human, but so is learning from mistakes. To prevent some of the unexpected acute dying processes, which make up about one-fourth of all human deaths, we must understand and help the world: 50% of humans on earth suffer from unsafe water or malnutrition, up to 90% might be considered impoverished, 70% are unable to read, and only 1% have a college education. Millions still die from preventable infectious diseases. Many are harassed, arrested, tortured, or killed by religious fanatics or other villains.

Academic environments can and should stimulate the human spirit for explorations. The recent NASA tragedy reminds us that exploration carries risks, which should make us humble. While some of you will be primed for serendipitous discoveries, others will seek roles in systematic, goal-oriented research programs. We also need some who build bridges between the two, as by our research center led by Professor Kochanek.

Many discoveries have been re-discoveries. For example, mouth-to-mouth resuscitation, practiced in the 1700s, was given up for 200 years and became established through physiologic documentation in 1957; and so did external heart massage, which was practiced by some surgeons in the late 1800s, only to be forgotten and rediscovered in 1958. Saving brain cells with hypothermia was suggested in the 1950s, then dropped because of side effects, and revived in the 1980s through serendipitous, novel re-discoveries.

The cranial cavity, until recently a black box, has become illuminated by neuroscientists: The rebellious Jesuit philosopher-biologist Teilhard de Chardin considered the human brain to be the tip of the arrow of evolution on earth. Such thoughts could stimulate hypotheses and explorations of evidence on the origin of life, and, beyond the Darwinian evolution, what made the human spirit emerge from the brains of the monkeys. Why is the majority of humans, whom I consider to be good and kind, often controlled by an evil minority?

Research activities' humanism depends more on the substance of discoveries or innovations than on grants, patents, and corporations. I grew up at a time when physicians were considered unethical when they pursued patents and profits for new life-saving therapies. Although this notion is now outdated, academic excellence calls for work with industries that have social conscience.

Reaching out

Académe should have no walls, as our University reaches beyond the local level. The academic university environment should not be an elitist, gated community. Examples in our schools of the health professions have ranged from the first polio vaccine developed by Salk and Youngner; Pitt's School of Public Health research programs; collegiality between physicians of Town and Gown; and the Freedom House Ambulance project, to hundreds of Pitt alumni around the world having created novel interdisciplinary programs.

For health care, academic humanism could help the US resuscitate itself from the current "mismanaged care for managed profiteering by non-professional middlemen." Its expense is double that in Europe while it often deprives even middle-income citizens of health insurance. Our universities should lead in getting a single-payer national healthcare system that covers the basic *needs,* as defined by wise clinicians. This system must have a pop-off valve for frills and unreasonable *demands.* My knowledgeable colleagues of our School of Public Health agree that we could have the best and most cost-effective national healthcare system in the world by learning from the successes and failures of systems abroad. What is wrong about our current non-system has been eloquently summarized recently in the University Times by Mr. Romoff, Vice Chancellor Levine, and Professor Lave. In spite of the difficulties imposed by the outside, care at our UPMC is the best one can imagine, as I have experienced it as a grateful patient.

Internationalism is fostered by academic environments more than is usually appreciated. As a chance survivor of World War II, I am grateful for the opportunity I have had at Pitt to extend resuscitation, emergency care, and critical care medicine programs to "disaster reanimatology" and what I call "peace medicine". Some military leaders of America, who have learned what their weapons can do to the human body, have become qualified pacifists.

Peace medicine includes peace-making soldiers and work for non-governmental organizations. Members of the Physicians for Social Responsibility, the American branch of the International Physicians for the Prevention of Nuclear War (which received the Nobel Peace Prize), and

the World Association for Disaster and Emergency Medicine (WADEM), which some of us co-initiated, are saddened—that after long, hard work and the end of the cold war—nuclear warheads are still in launch positions, and terrorists still can obtain weapons of mass destruction.

The World Federalist Association, which promotes "world peace through world law with justice", was founded by Norman Cousins in 1945, to support and help reform the United Nations. In Pittsburgh, Mark Nordenberg, who then was the Dean of our law school, and the World Federalist Association of Pittsburgh, established the McLean Lectureship on World Law. Professor Holzner, former Director of the University Center for International Studies, has linked up beautifully the influential World Federalists' Pittsburgh chapter with our academic environment.

Universities can help eradicate the roots of wars, such as poverty and ignorance, by promoting secular democracies, and by learning from history how to solve disputes by peaceful means. The US should lead the United Nations and international peace-making forces. Mankind must define terrorism and outlaw all cells and their fanatical leaders (religious and non-religious) who promote murder of unarmed civilians. Could universities help find ways to neutralize murderous dictators without killing innocent people?

Conclusions

Let us conclude by realizing that no manmade organization is perfect. Success requires hard work, tenacity and luck. In our *striving* for excellence, we have reason to look now at the glass of human evolution to be half full, compared to a century ago when, in hindsight, the glass was half empty. The chances for living full lives in developed countries have doubled.

Few creations of Homo sapiens have the opportunity to promote the goodness of mankind, including work ethic and integrity, as much as universities and their medical centers. Loyalties between individuals and institutions are important. Those of you who are leaving Pitt, remember and pass on the values Pittsburgh's academic environment has given you.

I thank you, my colleagues and associates, our university leadership under Chancellors Litchfield, Posvar, and Nordenberg, and the UPMC, for an academic environment in which free thinkers have opportunities to be creative, and in which *humanism* can flourish.

– END –

https://doi.org/10.1017/S1049023X00002235 Published online by Cambridge University Press

First Yale New Haven International Congress on Disaster Medicine and Emergency Management

September 12-13, 2005

Omni New Haven Hotel
155 Temple Street
New Haven, Connecticut, USA

The conference will provide hospital, pre-hospital, public safety, public health and emergency management professionals with:

- Current best practices in health emergency management, including healthcare and public health organizations
- Recent progress in clinical disaster medicine
- Lessons learned from recent international and national disasters
- Latest research and development in disaster medicine and emergency management

Registration will begin on April 15, 2005 and can be accessed through our Web site at: http://yalenewhavenhealth.org/emergency/commu/natlconf.html

Abstracts are being accepted until June 1, 2005 at: http://yalenewhavenhealth.org/emergency/commu/call_abstracts.html

Contact:
203-688-3224 or center@ynhh.org

Conference Co-sponsors:

Yale New Haven Health

Pan American Health Organization
Regional Office of the World Health Organization

Yale University School of Medicine

World Association for Disaster and Emergency Medicine

https://doi.org/10.1017/S1049023X00002235 Published online by Cambridge University Press