

# Chapter 5: Cancer, Global, Pandemic, Health, Ethics, and Social Justice: A Meditation on Some Five-Letter Words that Are Pervasive Accelerants

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In reflecting on cancers, Richard Jackson stresses the serious social harms caused by inadequate prevention and, within the social fabric, he examines what he calls the “cancer accelerants:” water, power, money, and greed. They are four specific factors that require ethical attention. Water powerfully influences past and future health and well-being, for human beings and for the planet. Water conflicts are ethically troubling. Powers at play within the medical/industrial complex lead to further power imbalances in the social fabric, which are increased and worsened by structural racism and systemic impoverishment. Money further complicates any attempt to promote greater social justice whether one considers, on the one hand, financial interests and, on the other hand, lack of financial resources and poverty. Finally, greed poisons human and social interactions by inhibiting virtuous behaviors and choices, both at the personal and social level.

Billions of dollars have been spent investigating the genetic and biological causes of cancer. The National Cancer Institute alone has funded \$27 billion over the last five years, and far more is spent on treatment.<sup>1</sup> These expenditures are understandable. Cancer kills 600,000 Americans a year and brings immense suffering as well as social and economic costs.<sup>2</sup> At the same time, the narrow focus on, and support of, the model of “the brilliant researcher in a well-funded laboratory working to save lives” is an overly narrow and badly diversified

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<sup>1</sup> See National Cancer Institute, “NCI Funding Trends,” January 12, 2021, [www.cancer.gov/about-nci/budget/fact-book/historical-trends/funding#funding](http://www.cancer.gov/about-nci/budget/fact-book/historical-trends/funding#funding).

<sup>2</sup> See Center for Disease Control and Prevention, “Leading Causes of Death,” *National Center for Health Statistics*, October 19, 2021, [www.cdc.gov/nchs/fastats/leading-causes-of-death.htm](http://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm). See also Christian Cintron’s chapter in this volume.

investment. Reflecting on the broad agenda of the global cancer pandemic, with its many strands of causation and approaches, I propose there are some five-letter words that weave these strands and approaches together.

I affirm this as a physician with a long public health career committed to reducing risks to health from the environment, including tracking and reducing exposure to carcinogens. As my admired colleague Dr. Kenneth Olden, former Director of the National Institute of Environmental Health Sciences, observed: “The genes load the gun, but the environment pulls the trigger.” I worked hard in establishing childhood cancer and birth defect registries, on reducing health risks from pesticides, and in reducing chemical exposures by measuring the levels of chemicals in the bodies of a large sample of Americans. More recently, I have focused on the ways the built environment—how we build our homes, neighborhoods, and transportation systems—influences our health, often in ways we barely perceive.

It may seem that to improve the health of all we need more and better science. This is only partially true. Quadrupling health expenditures from one to nearly four trillion dollars a year has failed both for those who need care and those who provide care. More harmful are the science deniers, the disease- and vaccine-deniers and political and internet manipulators, who have harmed us and our neighbors. This was clearly the case with COVID-19. Look at the death rates in refuser communities. The serious harm from inadequate prevention is also true for cancer. I suggest that the triggers common to and accelerating both of these failures can be explained in a few five letter words.

## **Water**

The first of the five letter words is *water*. This is a reflection on my living in the western United States where water powerfully influences past and future health and well-being. While the Northeast and the Gulf Coast of the U.S. are coping with too much water, we in the Southwest must

confront too little drinking water, not enough for bathing, irrigating fields, and raising livestock. Los Angeles, the immense, second-largest city in the U.S., was founded in part because of its location on the Los Angeles River. As with all other great cities, early civic leaders realized that the city would languish without vast supplies of water from distant places, in this case, the Colorado River, the Owens Valley, and the western slope of the Sierra. California spent billions in capturing freshwater runoff and delivering it to Los Angeles and to the state's farms. California now directs 20 percent of its electrical power merely to pump water. Diminished West Coast precipitation and a reduced snowpack are making fresh water far more precious. Now, as you drive the major north-south freeway in California, you see newly desertified fields and dead orchards.

Water challenges foreshadow planetary collapse. At the time of the first moon walk in 1969, there were 3.5 billion people on the planet. Today there are 7.6 billion.<sup>3</sup> The planet's level of CO<sub>2</sub> in the atmosphere has gone from about 324 to 414 ppm,<sup>4</sup> causing the earth to become hotter with droughts. Wildfires and storms are becoming increasingly more lethal with "once in a century storms" becoming nearly annual events. When I speak about this, I try not to use the word *warming*. It does not capture the malignant power of a 2-degree C° increase in average global temperature. This increase is just the beginning. Water access will become a powerful trigger worldwide for political conflicts, often because of too little water, as from the melting of glaciers on the planet's "third pole," namely the Himalayan Hindu Kush that supplies water to 1.3 billion people.<sup>5</sup> As great a threat that drought is, too much water will be life

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<sup>3</sup> See United Nations Department of Economic and Social Affairs and Population Division, "World Population Prospects 2019: Online Edition. Rev. 1," 2019, [population.un.org/wpp/Download/Standard/Population/](http://population.un.org/wpp/Download/Standard/Population/).

<sup>4</sup> See CO2-Earth, "Latest Daily Co2," 2021, [www.co2.earth/daily-co2](http://www.co2.earth/daily-co2).

<sup>5</sup> See Arnico K. Panday, "Melting Glaciers, Threatened Livelihoods: Confronting Climate Change to Save the Third Pole," *United Nations Development Programme, Regional Bureau for Asia and the Pacific: Strategy, Policy and Partnerships*, June 3, 2021, [www.asia-](http://www.asia-)

destroying, with seawater inundation and submersion of productive agricultural areas, for example in Bangladesh and other areas in Southeast Asia. The United States Intelligence Report asserts that drought and flooding resulting from climate heating are threat multipliers and anticipates that they will lead to political conflicts and immense population migrations.<sup>6</sup>

## Power

I believe the second five letter word is *power*. I have often thought about how water and power in California are nearly synonymous. Power, especially the lack of it, relates to cancer. The continued use of carcinogenic chemicals over the years and in many geographic areas is the product of the political power of the manufacturers and distributors and the agriculture industry.

While considering powerful industries in the United States, I must include the medical/industrial complex, which accounts for 18 percent the U.S. Domestic Product and employs about 9 percent of its workforce. It also produces about 8 percent of the U.S. climate-forcing greenhouse gases. A different form of power shapes cancer mortality, and the rates are higher in areas with limited economic power, which are often marginalized because of race. Those with less power and resources have higher smoking levels and poorer quality food and are more likely to work in hazardous settings and to have earlier disabilities. Medicine has known for two hundred years that exposure to coal tars raises the risk of cancer, and yet as we speak, there are increasing political efforts globally to return to high rates of mining of cancer-causing agents like asbestos.

Power imbalance by using more advanced weapons facilitated colonialist expansion and was enabled by racist tropes to deny humanity

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[pacific.undp.org/content/rbap/en/home/library/human\\_development/policy-brief-confronting-climate-change-to-save-the-third-pole.html](https://pacific.undp.org/content/rbap/en/home/library/human_development/policy-brief-confronting-climate-change-to-save-the-third-pole.html).

<sup>6</sup> See Office of the Director of National Intelligence, "2021 Annual Threat Assessment of the U.S. Intelligence Community," April 9, 2021, [www.dni.gov/files/ODNI/documents/assessments/ATA-2021-Unclassified-Report.pdf](https://www.dni.gov/files/ODNI/documents/assessments/ATA-2021-Unclassified-Report.pdf).

to those seen as “the other.” When working conditions were intolerable—for example in sugarcane and cotton harvesting in the tropics—colonial power created a demand for economic and legislative human exploitation in the form of slavery. The cancer rates of those with low power are always higher than those of the plantation or factory owner. A leading destroyer of our health, and of capital and happiness, is structural racism and structural impoverishment. Think of the massacre and fires in 1921 of the “Black Wall Street” in Tulsa,<sup>7</sup> and of generationally impoverished families deprived of access to decent homes, neighborhoods, jobs, and family farms. Since 1980, the United States there has seen an acceleration in the assets of the very wealthy,<sup>8</sup> but no adjusted improvement of wages for the middle class, and a near flat line for the poor. Poverty remains pervasive and the condition of nearly 1 in 7 of our children.<sup>9</sup> In 1970, health care costs were about 7 percent of the Gross Domestic Product (GDP) and today they exceed 17.7 percent.<sup>10</sup> And while we have made scientific progress, I and many of my clinical colleagues are more concerned today than in the past about loved ones who must enter the “health system” than we were 40 years ago. It breaks my heart to see primary care physicians pushed to care for more than five patients an hour and dedicated nurses who need their unions to bargain for properly apportioned patient loads. The local hospital near where I live was taken

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<sup>7</sup> See Yuliya Parshina-Kottas, Anjali Singhvi, Audra D.S. Burch, Troy Griggs, Mika Grondahl, Lingdong Huang, Tim Wallace, Jeremy White, and Josh Williams, “What the Tulsa Race Massacre Destroyed,” *New York Times*, May 24, 2021, [www.nytimes.com/interactive/2021/05/24/us/tulsa-race-massacre.html](http://www.nytimes.com/interactive/2021/05/24/us/tulsa-race-massacre.html).

<sup>8</sup> See Thomas Piketty, Emmanuel Saez, and Gabriel Zucman, “Distributional National Accounts: Methods and Estimates for the United States,” November 2016, [gabriel-zucman.eu/files/PSZ2018Slides.pdf](http://gabriel-zucman.eu/files/PSZ2018Slides.pdf).

<sup>9</sup> See Children’s Defense Fund: Leave No Children Behind, “The State of America’s Children 2021,” 2021, [www.childrensdefense.org/wpcontent/uploads/2021/04/The-State-of-Americas-Children-2021.pdf](http://www.childrensdefense.org/wpcontent/uploads/2021/04/The-State-of-Americas-Children-2021.pdf).

<sup>10</sup> See Rabah Kamal, Daniel McDermott, Giorlando Ramirez, and Cynthia Cox, “How Has U.S. Spending on Healthcare Changed over Time?,” *Peterson-KFF Health System Tracker*, December 23, 2020, [www.healthsystemtracker.org/chart-collection/u-s-spending-healthcare-changedtime/#item-usspendingovertime\\_2](http://www.healthsystemtracker.org/chart-collection/u-s-spending-healthcare-changedtime/#item-usspendingovertime_2).

over by a large chain that reduced nurse staffing while increasing patient-loads even for the sickest patients. Even early in the pandemic the hospital business leaders were cost-cutting personal protective equipment and paying the healthcare system's CEO \$18 million per year.

## Money

The third five letter word is *money*. During my fourth year at Jesuit-run St. Peter's College in Jersey City, I traveled for medical school application interviews. At least three times during my interviews, I was asked, "Do you want to go to medical school to make a lot of money?" The first time I was asked I mumbled that I wanted to have a meaningful life, but it forced me to think about what I did not want. I did not want to be poor. I grew up that way, and I did not want constant worry about food, heating, and rent and have a desperate fear about medical bills. Frank McCourt's 1996 memoir, *Angela's Ashes*, reflected on the pain of being marginalized and ridiculed because he was poor.<sup>11</sup> I think of one in seven children in my country growing up in poverty, the pain of those fears, and the erosion of self-confidence. Having too little money meant too little power over one's life.

## Greed

The last five letter word is *greed*. The saying "Behind every great fortune there is a crime" is ascribed to many writers. Lawrence James's history, *The Rise and Fall of the British Empire*, outlines the degree to which colonialist military incursions were the political partner to immense trade operations such as the East India Company and the Hudson's Bay Company.<sup>12</sup> The British Navy, along with sometimes surprisingly small armies, were the operating arms of these corporations. Early on, Portugal and Spain extracted enormous amounts of gold and other wealth from South America, but feeding addictions and human trafficking was an even greater moneymaker.

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<sup>11</sup> See Frank McCourt, *Angela's Ashes: A Memoir* (New York: Scribner, 1996).

<sup>12</sup> See Lawrence James, *The Rise and Fall of the British Empire* (London: Little, Brown, 1994).

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Harvesting sugarcane throughout the Caribbean basin—to make lucrative, easily transported, rum—required disease-resistant heat-tolerant populations and fueled the transatlantic slave trade from Africa. The tobacco trade, the opium wars, and the drug wars follow this pattern. The more profitable an industry—for example, easy extraction of a ready resource and sale at premium prices—the more those who profit aggressively guard their positions in legal, legislative, and physical battles. While water, money, and power affect the mind, greed erodes moral boundaries. Self-interest is at the core of capitalism, but greed has become a global malignancy with omnipresent metastases, and the medical industrial complex is not greed-free.

The overselling of alcohol, tobacco, and unhealthy food—along with dangerous workplaces and vehicles—is a byproduct of greed. At these moments, we need the best of medicine with caring clinicians in organizations where health is a core value rather than a billboard slogan. I grew up in New Jersey, a state profoundly impacted by the petroleum, chemical, and pharmaceutical industries, which has affected the lives of family and friends. A few times each year, a friend or family member calls me about a recent diagnosis of cancer and looking for advice. I almost always give same advice (and this is the right advice for all “curbside consults”): “find the best possible physician and care setting you possibly can.”

The Lown Institute, named after renowned medical leader Dr. Bernard Lown, offers its Lown awards to role-model physicians like Don Berwick and Mona Hanna-Attisha.<sup>13</sup> The Institute’s other efforts include the Shkreli Awards for individuals and organizations who disgrace the title “caregiver.”<sup>14</sup> The Shkreli Award is named after the “Pharma-Bro” who cranked up the price of a long-standing essential anti-parasitic medication for children by fifty-six-fold. He eventually was sentenced to seven years in prison. I worry that we suffer a prison deficiency for powerful crooks.

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<sup>13</sup> See Lown Institute, “About,” 2021, [lowninstitute.org/about/](https://lowninstitute.org/about/).

<sup>14</sup> See Lown Institute, “Shkreli Awards,” 2021, [lowninstitute.org/projects/shkreli-awards/](https://lowninstitute.org/projects/shkreli-awards/).

Few if any tobacco industry CEOs have faced prison. I predict no prison for the CEOs of the Texas electric power companies who reaped great profits while exploiting a vulnerable power grid that failed in 2021 February's ice storm and led to over two hundred deaths.<sup>15</sup> Some hospital system CEOs are similarly self-serving. Even at the most prestigious healthcare institutions in Boston and New York City, published stories report the failure of their leaders to disclose outside corporate board memberships and extraordinarily lucrative retainers.<sup>16</sup> When I was a child, I thought that greed was personified by a villainous old man exulting in his diamonds and gold. Greed has become a systemic disease not merely in individuals but a blood cancer of the modern world reaching across societies and right to the top of all world governments. When you first looked at the table of contents of this volume, it might have seemed to have many disparate strands, but they weave together in a fabric that suffocates public health progress and covers many avoidable and, yes, moral threats.

The U.S. has been at “War with Cancer” for over fifty years, but cancer threats will always reside in living cells. I would suggest that the cancer accelerants of water, power, money, and greed must be brought to justice so that humanity can prevent and control this cursed disease rather than merely continue to amplify it.

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<sup>15</sup> See Jeremy Schwartz, Kiah Collier, and Vianna Davila, “Power Companies Get Exactly What They Want: How Texas Repeatedly Failed to Protect Its Power Grid against Extreme Weather,” *The Texas Tribune*, February 22, 2021, [www.texastribune.org/2021/02/22/texas-power-gridextreme-weather/](http://www.texastribune.org/2021/02/22/texas-power-gridextreme-weather/).

<sup>16</sup> See Charles Ornstein and Katie Thomas, “Memorial Sloan Kettering Leaders Violated Conflict-of-Interest Rules, Report Finds,” *New York Times*, April 4, 2019, [www.nytimes.com/2019/04/04/health/memorial-sloan-kettering-conflicts-.html](http://www.nytimes.com/2019/04/04/health/memorial-sloan-kettering-conflicts-.html).

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nine years he was Director of the National Center for Environmental Health at the Center for Disease Control and Prevention (CDC), and he received the Presidential Distinguished Service award. He was also elected to the Institute of Medicine of the National Academy of Sciences.