The Art and Science of Compassion, A Primer

Reflections of a Physician-Chaplain

Agnes M.F. Wong

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Foreword

Roshi Joan Halifax

At a science conference in India, His Holiness the Dalai Lama noted that "Compassion is not religious business; it is human business. It is not a luxury . . . it is essential for human survival." He later wrote, "However capable and skilful an individual may be, left alone, he or she will not survive. However vigorous and independent one may feel during the most prosperous periods of life, when one is sick or very young or very old, one must depend on the support of others. . . . I believe that at every level of society—familial, tribal, national, and international—the key to a happier and more successful world is the growth of compassion."

We cannot say with certainty whether compassion is genetic, instinctual, intentional, cultural, or socially prescribed. However, we have learned from scientific research that compassion enhances the welfare of those who receive it and also benefits those who give it. Compassion also benefits those who observe an act of compassion.

Over my years of caring for dying people, I came to see that compassionate presence can reduce the anxiety dying people experience and can also have a positive effect on those who serve others who are suffering.

Years ago, my student Dr. Gary Pasternak, the medical director of Mission Hospice in San Mateo, California, and a long-term meditator, sent me an email that moved me deeply. It exemplified the qualities that I have come to value in a physician. He wrote,

> I'm up late admitting patients to the inpatient hospice unit. Just when I think I'm too old for these late nights without sleep, a person in all their rawness, vulnerability, and pain lays before me and as my hands explore the deep wounds in her chest and my ears open to her words, my heart cracks open once again. . . . And this night a sweet 36-year-old woman with her wildly catastrophic breast cancer speaks of

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> her acceptance and her hope for her children, and she speaks with such authenticity and authority. And her acceptance comes to me as the deepest humility a person can experience and then again, once again, I remember why I stay up these late nights and put myself in the company of the dying.

Dr. Pasternak's words reflect respect, humility, care, and courage. He was able, in the midst of distractions and sleep deprivation, to slow down and open to the reality of life, suffering, pain, and death. For me, this is compassion: the ability to turn toward the truth of suffering with concern, care, and equanimity and with the wish to relieve that suffering.

I believe that compassion is central to us being fully human. It is also a key to reducing systemic oppression and nurturing a culture of respect, civility, and belonging. It is an experience that makes cultures, organizations, and humans successful. To help us understand the necessity of compassion, science is making a strong case for its benefits and the importance of compassion for our survival and fundamental health. This book addresses why and how compassion is a necessity in the medical workplace. To this end, I want to give a bit of background on how compassion found its way into neuroscience laboratories.

In the summer of 2011, a group of scientists, scholars, and contemplatives gathered in Berlin in the studio of Icelandic/Danish artist Olafur Eliasson to explore approaches appropriate to training in compassion as well as important questions related to neuroscience research into compassion. The invitation was offered by a leader in neuroscience research at the Max Planck Institute in Leipzig.

The vision behind this meeting was that compassion was an essential feature in personal and social well-being, but one that had not been adequately mapped neurally, nor had training protocols been developed that would serve in secular settings. The thought was that neuroscience research into compassion might yield important insights into how to train others in compassion and would also point to the value of compassion in medicine, education, and other areas of life.

As we know, compassion is often associated with religion. It is also believed by some to be potentially unhealthy and the cause of distress in those who manifest it. This Berlin meeting was supported in the

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hopes that important research endeavours related to compassion in Europe, the United States, and Asia would eventually be pursued.

Before the meeting in Berlin, neuroscience research on compassion was in its early stages. Relatively small number of meditation adepts participated as research subjects in the laboratories of neuroscience and social psychology so that scientists could map the neural substrates of compassion and assess its psychological and physiological effects. More recent research projects have involved explorations of immune response in relation to compassion and, as well, compassion's effects on longevity. Because there seems to be a deficit of it in our society, including in the field of medicine, research on compassion has taken a quantum leap in recent years, including in the laboratories of the Max Planck Institute in Germany and Keck Laboratory in Madison, Wisconsin.

In order to research compassion and ultimately to develop training approaches in compassion in relation to medicine and other disciplines, one must have a clear understanding of how compassion is structured and operates. To this end, the meeting in Berlin was an important step by contemplatives, social psychologists, and neuroscientists in exploring the process and structure of compassion.

For many decades, I myself have been engaged in the study of compassion by delving deeply into the literature on compassion, analyzing my own experience as a contemplative practitioner, receiving traditional teachings on compassion from Buddhist masters, working with neuroscientists and social psychologists on research questions related to compassion, being present for the profound suffering encountered by dying people and by those in the prison system, and, most importantly, training professional caregivers and patients in approaches to compassion.

These combined experiences led me to question how we define compassion in our culture and, as well, to question the effectiveness of how we train others in compassion. To this end, I developed a heuristic map of compassion and a training intervention in cultivating compassion in the process of interacting with others. The map is called the A.B.I.D.E. model and the intervention is called G.R.A.C.E., a mnemonic for: *g*athering attention, *r*ecalling intention, *a*ttuning first to self and then to other, *c*onsidering what will serve, and *e*ngaging and

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*e*nding. Now G.R.A.C.E. has been taught in many parts of the world in clinical settings, including in Asia, Europe, and the Americas.

I was fortunate that Dr. Agnes Wong, my student and a brilliant clinician, brought her keen mind to explore how compassion could serve clinicians. This book is the result of her direct experience as a clinician, her observations of the challenges clinicians face in giving care to others, and her finely tuned synthesis of compassion research, including my work in compassion.

Compassion has been loosely defined as the emotion one experiences when feeling concern for another's suffering and desiring to enhance that person's welfare. Compassion has two main aspects: the affective feeling of caring for one who is suffering and the motivation to relieve that suffering. As Dr. Wong has noted, however, compassion is a much more nuanced experience, a process that is contingent and emergent. It is grounded in interrelationality and is an experience of mutuality that is reciprocal and asymmetrical. Thus, compassion is possibly not a discrete feature per se, but an emergent and contingent process that is fundamentally context-sensitive.

If this is the case, then training others in the medical field in the cultivation of compassion necessitates that one discovers the processes that nourish and enhance compassion. It is also an exploration of what can sustain clinicians as they face the suffering of their patients and, as well, the suffering of their colleagues and themselves. Dr. Wong's precise work reflects these questions and gives a clear picture of how the instantiation of compassion in medical training will serve both clinicians and patients. Her book is an important, timely, and challenging work that will open many doors for those who read it.

Roshi Joan Halifax, PhD
Abbot, Upaya Zen Center and Institute,
Santa Fe, New Mexico

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Foreword

Gregory L. Fricchione

In this very fine book, Dr. Agnes M.F. Wong—a well-known neuro-ophthalmologist and neuroscientist—melds her personal story with an important message for patients, family members, caregivers, and society at large that emanates from her unique perspective as a physician, scientist, and Buddhist chaplain. After suffering a severe bout with hearing loss and the distress of severe tinnitus, she stopped to take stock of her life in the midst of deep melancholy. She found a new appraisal of what matters and discovered that this meaningful place where the better angels of our nature reside in a spirit of awareness of the present moment infused with compassion and loving kindness, can present all of us with a springboard to healing and indeed to flourishing. Dr. Wong lays out the present-day neuroscientific hypothesis about why mindfulness meditation—the product of single point focus attention and non-judgmental open awareness—can change brain structure and function and importantly, "set the stage for compassion/loving-kindness training by modulating attentional resources (in the attention networks), regulating emotion processing and control (in the limbic system), and altering self-referential processing (in the default mode network)." She proceeds to argue cogently about the desperate need we have as individuals and as society itself to nurture the practice of mindfulness and compassion and then she tells us the good news that there are protocols available that do just that. In essence, she writes:

> To build inner compassion, we need to shift from the threat system to activate the affiliative system. By intentionally slowing down, mindfulness training is particularly valuable in allowing us to choose to respond differently. By activating the affiliative system, we are better able to *think* and to *behave* in more compassionate ways.

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It is a common misconception in the public that meditation is all about learning to detach from the world. I once asked a friend of mine, the Buddhist monk and psychologist, Dr. Lobsang Rapgay, about whether the Buddha had non-attachment as his goal for developing classical mindfulness. I recall him saying that the Buddha was trying to find a way that would strengthen our ability to be present with those who are suffering and to offer them relief in solace and succor. So, meditation is ultimately about enhancing one's capacity to attach in compassion to those who are suffering.

Dr. Wong knows this and expresses this great wisdom very wisely in this book.

Gregory L. Fricchione, MD
Associate Chief of Psychiatry
Massachusetts General Hospital
Mind Body Medical Professor of Psychiatry
Harvard Medical School
Boston, MA

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Preface

What Is This Book About?

Compassion is a core value in healthcare. A recent survey shows that 85% of patients and 91% of doctors value compassion, making it the most important principle in healthcare.[1] However, terms like "compassion," "empathy," and "sympathy" have been used interchangeably in common parlance, and their definitions vary in the literature. This semantic and conceptual confusion has important implications for clinical practice, medical education, and research. In addition, while medical schools offer courses on communication skills, patient–physician relationships, and social determinants of health, compassion is inconsistently taught, valued, and measured,[2] partly because of the lack of a standard curriculum that covers the full gamut of this construct, from conceptual to experiential.

This book is designed as a short, "all-in-one" introductory text that covers the full spectrum of compassion, from the evolutional, biological, behavioural, and psychological, to the social, philosophical, and spiritual. Written with busy trainees, clinicians, and educators in mind, it aims to address the following questions concisely: What is compassion? Is it an emotion, a motivation, or is it multidimensional? Is it innate or a trainable skill? What do different scientific disciplines, including neuroscience, tell us about compassion? Why is "compassion fatigue" a misnomer? What are the obstacles to compassion? Why are burnout, moral suffering, and bullying so rampant in healthcare? Why does compassion decrease during medical training? And, finally, what does it take to cultivate compassion? It is my hope that by providing readers with a solid conceptual framework, the materials presented here will inspire, reinforce, and integrate with the experiential component of compassion that requires diligent cultivation, training, and practice.

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Why Did I Write This Book?

I am a physician, scientist, and educator. I work in a tertiary/quaternary pediatric hospital and am a professor in a major academic centre in North America. I once thought that I lived a very fulfilling life: providing the best care to children and their families through direct patient work, generating exciting new medical knowledge through research, and nurturing new generations of physicians and scientists through teaching, as well as serving my colleagues, hospital, university, and the larger healthcare system through various leadership positions.

With my drive, determination, and work ethic, I ascended the academic ladder rapidly, being promoted from assistant, to associate, and then to full professor in fewer than 10 years. I was named a highly coveted endowed Chair at the relatively young age of 40. When I was 45, I became the Chief of Ophthalmology in my hospital and the Vice Chair of Research in my university department. I held multiple prestigious research grants simultaneously for many years, published extensively in top journals in my field, and directed a large laboratory that hired many scientists, engineers, technicians, and students. I travelled around the world on a regular basis, giving keynote speeches and named lectureships, along with being a visiting professor. I received numerous accolades for my research and teaching endeavours. I felt that I was truly blessed because I would not have accomplished all these without the unyielding support of a loving husband and two adorable sons. Many would say I had reached the pinnacle of success as a physician-scientist while at the same time achieving a very fine work–life balance.

But these accomplishments were not enough. I strived to advance upward by pursuing a degree in Master of Business Administration while managing a full workload. Then, something completely unexpected happened. I developed a hearing loss in one ear, 4 years ago, at age 48. The worst part of it was a constant, 24/7, non-stop ringing in my ear. I could not rest, I could not sleep, I could not have a moment of peace and quiet. I was treated with steroid injections into my ear. I was also put on oral steroids. Not only did they not help, I developed suicidal thoughts which frightened me to the core. When all Western treatment options were exhausted, my doctor covertly told me that he did not want to see me anymore. I felt abandoned, desperate, and

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hopeless inside. But, on the outside, I put on a brave face and continued to carry out all of my duties, pretending that I could endure all of these challenges with my usual determination and perseverance.

As I suffered deeply inside, I began to see clearly all the sufferings around me. I realized that, despite many successes, our satisfaction seems to be short-lived—very soon it diminishes, and we find ourselves wanting more. At times, we become unhappy because we don't get what we want, or we get what we don't want, or we worry about things not going our way. As I looked around, I felt deeply the stress that my co-workers experience every day from an excessive workload, the agony that we face when making complex and difficult decisions, the moral distress that we witness in the workplace, the tugging at our hearts from our family and relationships as we juggle multiple competing demands, and, ultimately, the suffering that we all have to confront through sickness, old age, and the inevitable demise of our loved ones and eventually our own self.

I started to see more and more vividly the cycles of stress and anxiety that we all encounter, as well as how my own reactivity contributes to these cycles of negativity that affect not only myself but also everyone around me. I began to realize clearly that our well-being does not come from achieving, acquiring, and accumulating. While there is nothing inherently wrong with the rewards that come from hard work, the pitfalls of success come when maintaining these privileges—in my case, a successful medical practice, prestigious academic titles and honours, an esteemed social status, big house, nice car, exotic vacations—become an obligation. At a certain point in time, the pursuit of material possessions, pleasures, praise, and recognition makes life feel hollow. Without awareness and the courage to look deeply or make changes, we may work harder and accumulate more only to find that the happiness and deep fulfilment that we long for remain elusive.

I began to realize that true happiness can come only by examining what's inside, by investigating the relationship between the external world and our inner self, and by changing our habitual patterns in response to our thoughts, feelings, and emotions. After a very long period of reflection—the dark night of my soul*—I decided to pursue

* This phrase originates from a poem by St. John of the Cross (1542–1591), a Spanish Carmelite monk and mystic, whose best known work *Noche Oscura del Alma* is translated as "The Dark Night of the Soul."

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a different path and do the unthinkable. I stepped down from all the leadership positions before completing my terms. I closed my laboratory. I turned part-time. However, my heart was torn because all of these radical changes were incompatible with my deeply ingrained ambition, competitiveness, and perfectionism. Going through these changes felt like a career suicide, an existential crisis, a mini-death. I kept thinking: What will people think of me? Am I disappointing my hospital staff? How could I be so irresponsible by abandoning many long-time employees whose livelihoods depend on me? Will I ever be trusted again? Am I setting a bad example for my kids and trainees by being a "quitter"? Are the many years of training and the experiences that I have accumulated to finally become a highly specialized expert going to waste? What will be the financial implications? Confronting these questions was painful, heart-rending, and frightening. Unknown to me, my identity, self-worth, and sense of purpose had been wrapped up completely with my roles, titles, and external validation. I asked myself: Who am I *really*, and what should I do next? I knew deep inside that I must commit to my decision no matter how raw, excruciating, and harrowing the process was.

I began by looking at what I enjoyed most. I realized that what has brought me the most joy was meeting people, listening to them, and serving them in whatever way I could. I also recognized that I have been increasingly drawn to the spiritual needs of the dying, having witnessed and been immersed in some truly life-changing, genuinely human, and amazingly enriching experiences while caring for my dying father, mother-in-law, and mentors. At the same time, I have been practising mindfulness for several years, which has helped me to be stronger, calmer, and more opened to new perspectives. I wanted to delve deeper into its roots that originate in Buddhist traditions. Out of these considerations, I resolved to pursue chaplaincy training with Roshi Joan Halifax,* so that I could hone my skills to serve others and explore how to care for the dying while at the same time deepen my spiritual practice.

* The term "Roshi" is a respectful honorific to a precious teacher or a master in the Zen tradition.

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Chaplaincy training has been a deeply healing and transformative experience. I now realize that I must touch deeply into my own pain and sorrow so that I can look clearly into the underlying causes of the inherent unsatisfactoriness of our conventional lives. From a visceral appreciation of the universality of suffering, a deep motivation was aroused in me: to lead an awakened life with integrity, courage, and wholehearted practice, to alleviate the miseries of all beings, and to touch the true nature of reality. Learning to embrace not knowing, to bear witness to the joys and pain of life, and to discern what is the most skilful action at each moment has been challenging and yet, paradoxically, deeply grounding and nourishing. I can now see acutely that my earlier notion of service, though noble and well-meant, was based on many previously hidden, naïve, and incomplete assumptions and orientations. It was based on the concept of "fixing" what is broken and "helping" what is weak from a position of being better and stronger, rather than coming from a deep inner place of humility to serve life as whole.* I also notice, despite the best intention to serve, how quickly, easily, and furtively my ego slips in for its own gratification.

Chaplaincy training has brought me to many unanticipated, uncharted, yet remarkable territories. Working as a hospice volunteer in the community, I came to know a "dying" young woman with a malignant brain tumour. She had been given less than a year but continued to live for another decade. I feel that I have come full circle. As a neuro-ophthalmologist, I see patients with brain tumours regularly, monitoring their visual and neurologic functions. I have rarely paused, if ever, to imagine what living a life with multiple handicaps, uncertainties, and imminent threats of death feels like. At the same time, the strength, resilience, and wisdom this young woman revealed have given me a new appreciation of the mystery and sacredness of living and dying.

Through serendipity, I have also become a volunteer in a prison, working with inmates on a weekly, one-on-one basis. It is truly an

* I learned the differences between helping, fixing, and serving from Dr. Rachel Naomi Remen who wrote: "Helping, fixing, and serving represent three different ways of seeing life. When you help, you see life as weak. When you fix, you see life as broken. When you serve, you see life as whole. Fixing and helping may be the work of the ego, and service the work of the soul" (*Shambhala Sun*, September 1999).

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eye-opening experience beyond my wildest imagination. I have become a witness to the most unimaginable, horrendous, and unbearably painful life circumstances that these men have endured from a very young age. I am astonished to notice a common theme among these men: extreme poverty, discrimination, physical and sexual abuses, alcohol and drug addictions, mental illnesses, psychological traumas, and violence, as well as brain and other physical injuries. Moreover, these adverse conditions seem to span generations. I also see how these men are forgotten by society, incarcerated in prison with its culture of subordination, without freedom, without having their simple needs or basic human rights met. They constantly continue to face physical and sexual violence, cruelty, injustice, loneliness, fear, and worse. Their experiences have made me realize that I have lived a privileged life, cocooned and ignorant of how different it could have been. How could I not bring my presence, my willingness to listen, and my companionship to these men who have never had the opportunities that I have taken for granted?

With these poignant exposures to life's adversity, I realized that I need to cultivate a deeper compassion and skilful means before I can truly serve others. Therefore, I decided to take a deep dive to study compassion in earnest for my chaplaincy thesis, combining my longstanding interests in psychology, biology, neuroscience, and social science with my curiosity to explore Buddhist teachings in greater depth. When I first encountered the ideal of *bodhisattvas*—enlightened beings who are motivated to end all sufferings until all are liberated—I was completely enthralled. It was as if the ordeal of my hearing loss (which has since resolved) had cracked open my heart to hear the cries of the world, dissolving my personal boundary beyond time and space. When I first came across the idea of the "great compassion"—a non-referential, boundless compassion that becomes one's *raison d'être* not only to practise wholeheartedly, but also to pursue intellectual understanding to penetrate into the ultimate truth—I was moved to tears. I now realize that my interests in the sciences and my love for reading and writing, as well as my zeal for teaching, are not necessarily self-centered pursuits that hinder the path to awakening. On the contrary, I can realign my interests with a deep aspiration and intention to benefit all others. The results of this

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we vicariously share their affective state, while at the same time we are aware that our response is elicited by their emotion. As such, empathy can be conceptualized as having four components: (1) an affective sharing, (2) an isomorphism of this affective sharing (i.e., sharing the same emotional state as the other), (3) a mental representation of the other's affective state, and (4) a top-down discrimination of self from other.[3] From this definition, we can see an evolution of our understanding of empathy from an original, more automatic "feeling into" the experiences of another (i.e., emotional empathy—the first two components of the concept) to the cognitive modulation of affective sharing through a top-down differentiation of self from other (i.e., cognitive empathy—the last two components).

In addition to a distinction between emotional and cognitive empathy, empathy can lead to two divergent responses: empathic distress and empathic concern.[4] *Empathic distress* is an aversive and self-oriented emotional response to others' suffering. It is often associated with withdrawal behaviour to protect oneself from negative emotional experiences when the self–other distinction becomes blurred. Empathic distress is especially relevant for healthcare workers as they are often and repeatedly exposed to others' suffering, which can result in emotional exhaustion and burnout. Fortunately, empathy does not inevitably lead to empathic distress. Through awareness and training, empathy can be transformed skilfully into *empathic concern,* an other-focused, more adaptive and positive emotion and a motivation that primes compassion,[5–7] a topic that I discuss in the next section.

The origin of empathy can be traced back to well beyond the emergence of human and non-human primates. Its earliest vestiges can be found more than a hundred million years ago in primitive mammalian species including elephants, dolphins, and whales, in the forms of motor mimicry, emotional contagion, and pre-concern.[8] From dogs howling to the distant cries of coyotes (mimicry), to toddlers crying when another toddler cries in a nursery (emotional contagion), to the seemingly spontaneous approaching behaviour of a young rhesus monkey to another which is injured (pre-concern), there are abundant behavioural examples in the natural world that are considered precursors of empathy. Using "Russian dolls" as a model, the Dutch primatologist and ethologist Frans de Waal suggested that emotional

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connection is the innermost core around which empathy evolves and is constructed (Figure 1.1).[8] Bodily and emotional connection—the innermost core—induces in the subject an emotional state that is similar to that of the object (i.e., state-matching between subject and object). As prefrontal lobe functioning and self–other distinction increase in higher species, sympathetic concern and perspective-taking—the doll's middle and outer layers—evolve. The hard-wired innermost emotional core, however, remains fundamentally linked to the outer layers and generates somatic/emotional perception and action (perception–action mechanism). According to de Waal, empathy has evolved and been selected for its prosocial, protective, and survival value.[8,9] In particular, empathy is likely to have emerged as a result of increased parental care as a means to improve offspring survival in species with a so-called *K-selected life history pattern* (long individual life span, small litter size, immaturity at birth with long dependence on

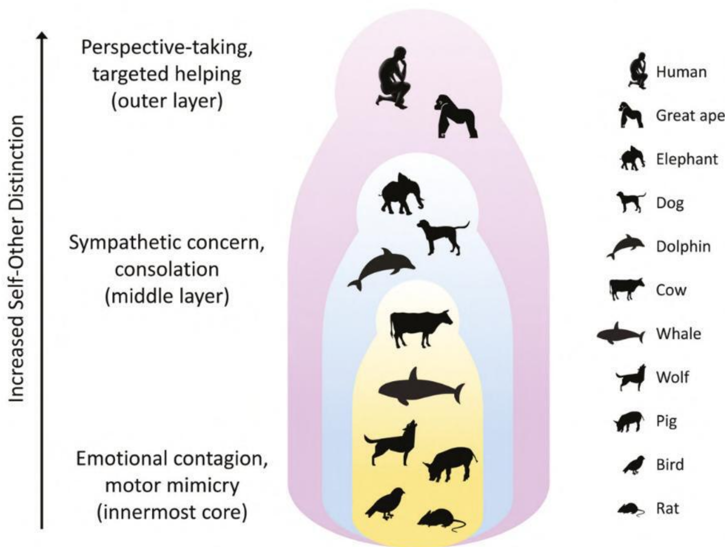

Figure 1.1 The Russian dolls model showing the layered nature of empathy as proposed by Frans de Waal.[8]

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