

I.

What is Emotional
Intelligence, Really?

CHAPTER 1

The Discovery

- PHINEAS GAGE

A tragic accident uncovers the secrets of emotional intelligence.

- THE OTHER SIDE OF SMART

What does emotional intelligence look like?

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PHINEAS GAGE

Should you think these remarks of sufficient importance to deserve a place in your Journal, they are at your service.

-- DR. JOHN HARLOW,

To the Boston Medical and Surgical Journal, 1848

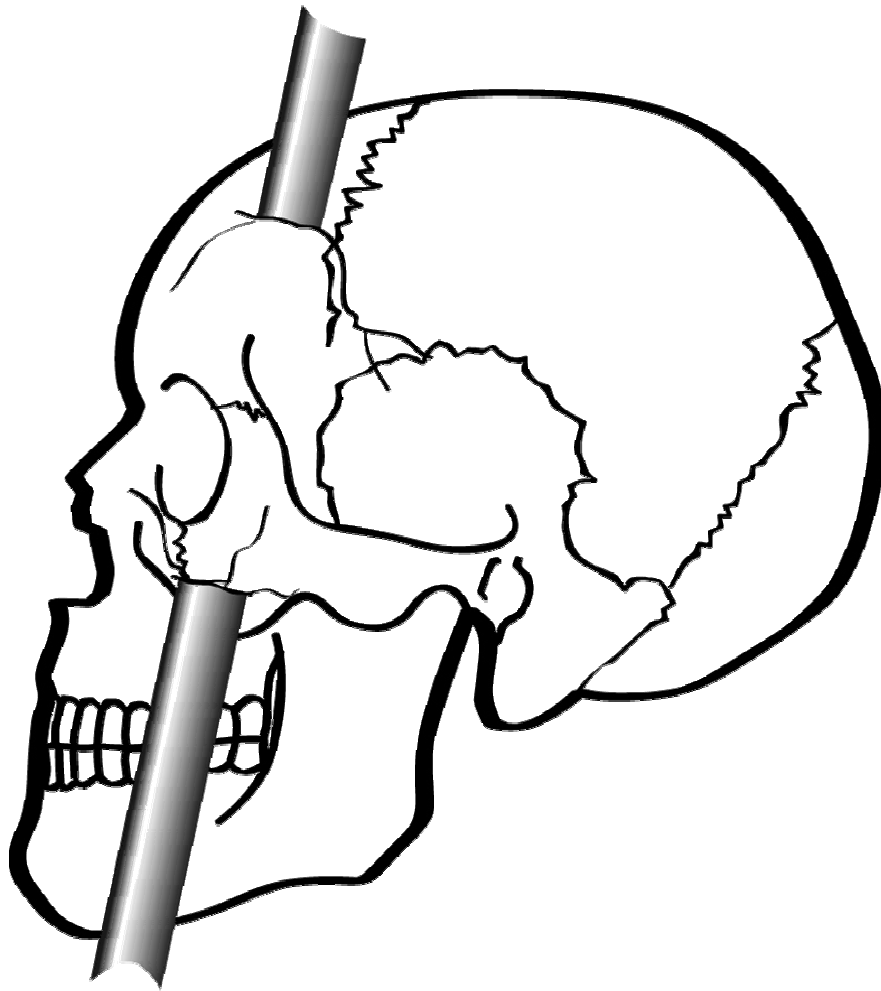
It was frigid and damp at dawn the last day Phineas Gage arrived to work on time. As he shoved his hands in the pockets of his jacket and cut through the cold, he contemplated the challenges that lie ahead building the Burlington railroad through Vermont. In the 18 months he'd served as foreman, the crew made considerable progress, but the terrain they were now forced to conquer was rocky and unforgiving. The early dawn light, softened by the moisture in the air, scarcely lit the winding path to the job site.

The distant rhythm of iron sledgehammers thumping in sequence was soothing and forced an early-morning smile from Phineas' lips. His crew was on the job a full 15 minutes before first whistle. Phineas had earned his reputation as "the most efficient and capable foreman" in the company. The discipline and passion he brought to the site ensured projects were completed on time, and the social niceties he espoused made him a favorite with the men he supervised. A "shrewd, smart business man," he walked his talk, avoided the alluring depravity of the local saloon, and got along famously with family and friends.¹

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The day wore on with the usual efficiency. Yard by yard Phineas and his crew laid the tracks, blasting through the rugged terrain in the quest to speed travel for busy commuters. By the time he glanced at his watch at 4:30, they had added half a mile to the rail line. With skill Phineas thrust his 43 inch tamping iron into the angled blasting hole and entertained thoughts of the day he retrieved this special rod from the local blacksmith. The brawny craftsman had explained to Phineas with uncharacteristic glee that this iron was unlike any other he had ever seen.

Before taking the next swing in his daily exercise of geometry and strength, Phineas signaled his assistant to pour sand in the blasting hole. The layer of sand would protect the powder from exploding prematurely while he packed it with the tamping iron. As Phineas reared back to swing, he was startled by a shrill racket behind him. Peering over his right shoulder, he discovered the crew in the pit had knocked over a large load of boulders they were transferring to a platform car with a crane. Phineas sighed briefly to mourn the setback, then completed his swing with the iron, naïve to the fact that his assistant was also distracted by the noise. The assistant failed to place sand in the hole and the scrape of Phineas' iron against the rock perimeter of the crevice created a spark big enough to ignite the unprotected powder at the bottom. The raw force of the explosion launched Phineas' tamping iron like a rocket. It pierced his face below his left eye and continued upward through the top of his head and beyond. The iron finally settled in the weeds 100 feet from the spot where Phineas stood.

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Trajectory of the 43 inch tamping iron that traveled through the head of railroad foreman Phineas Gage on September 13th 1848. The iron's violent path removed the entire front portion of his brain. His skull and the original iron that went through it are still on public display in the Warren Museum at the Harvard Medical School in Massachusetts.

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Phineas' body flew backward from the impact and he lay silently for a moment, writhing in shock. A thin whisper of air disguised his overwhelming desire to scream—it was all the noise he could force from his lungs. He could feel the wound below his eye where the 13 pound tamping iron—43 inches long and a full inch and a quarter in diameter--had thrust itself through his face. He had no sensation of the massive hole the iron left as it emerged through the top of his head. The world as he knew it changed forever that afternoon.

Phineas' loyal crew rushed to his side and looked into his eyes for any sign of life. They laughed anxiously as Phineas peered up at them and groaned, "I think I'm going to need to see Dr. Harlow." His sense of humor still intact, Phineas' men loaded him into an ox cart to take him to town. Sitting upright in the cart with his own strength, Phineas noticed his assistant walking somberly beside him. He leaned over and made a request typical of any foreman leaving the job site, "Hand me the book please." Like young boys watching their father perform a Herculean feat of strength, the bemused railroad workers stood in awe as Phineas logged his exit from the job site.

At 5:30 p.m. on Wednesday, September 13, 1848--just one hour after his horrific accident--Phineas Gage stood unassisted on the patio of his home. The local physician, expecting nothing coherent to come from Phineas' lips, asked his crew for a briefing. "Well, here's enough work for you Doctor," Phineas interrupted before anyone could speak, "The iron entered here and came out my head here." Despite having the front portion of his brain scooped from his skull much like you might a hunk of melon at breakfast, Phineas could think and speak just like he could before the accident. He was treated earnestly in the coming weeks by Dr. Harlow and eventually his physical wounds healed. The accident seemed to leave nothing more than scars and weak vision in his left eye.

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Phineas' survival and quick recovery baffled his family and friends. As he tried to return to business as usual, they realized something was hauntingly different. His first peculiar new habit was his temper. He cursed like a sailor and gave conflicting orders that followed his mood. The man who never arrived late for work was now apathetic about getting the job done. The contractors who once touted him as their most capable foreman were forced to terminate his employment.

For the 11 years Phineas lived after the accident, he was transformed. Dr. Harlow's detailed notes describe a pervasive change in his behavior that could only be explained, literally, by the missing pieces of his mind,

The effect of the injury appears to have been the destruction of the equilibrium between his intellectual faculties and the animal propensities. He was now capricious, fitful, irreverent, impatient of restraint, vacillating...His physical recovery was complete, but those who knew him as a shrewd, smart, energetic, persistent business man, recognized the change in mental character. The balance of his mind was gone.

To put it bluntly, Phineas' emotional intelligence left his head for good that morning. In removing the front portion of his brain, the tamping iron took with it his ability to turn his impulses and emotions into reasoned action. Phineas was left a walking, talking, sentient being, yet one with very little self-control. Somehow his intellect remained intact. He could do complicated math problems and understood the logistics of building the railroad. He lived independently, just as he had before the blast. Those he met assumed his rash behavior was just a part of his personality, but previous acquaintances knew differently. They found the new Phineas irrational and erratic. Every urge and feeling seemed to generate impulsive action and, more often than not, it had a disastrous effect upon the quality of his life.

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THE PATH BETWEEN FEELING AND REASON

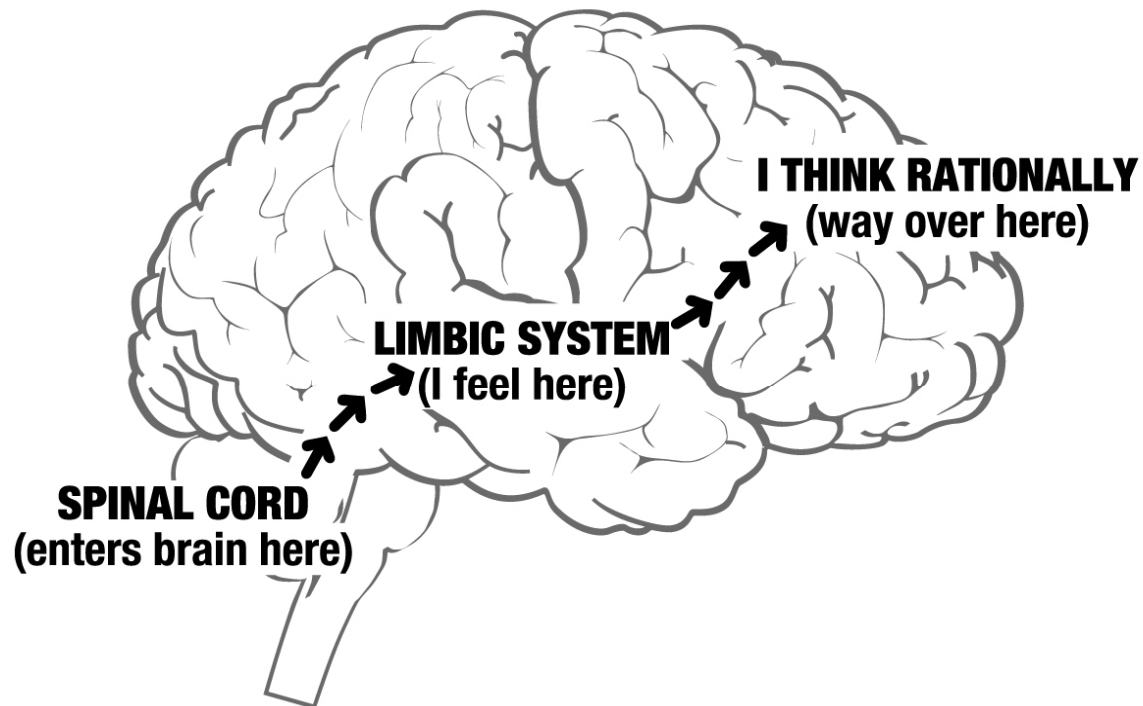
Phineas' grisly accident continues to baffle us today. His survival was truly a miracle and the changes in his behavior teach us more about the brain than the most sophisticated technology available. Modern devices can map the brain to show which areas are most important for different types of thought, but no gadget can show how a human behaves without the assistance of the front of his brain. Phineas' mishap is more than a fascinating story to tell around the campfire; it shows us something important about how humans think. The daily challenge of dealing effectively with emotions is a critical part of the human condition. Even people with their brains wholly intact can fall victim to irrational behavior.

Unlike Phineas, we have a choice in how we respond to emotions. Each of us takes in information from the world around us through the five senses. Everything we see, smell, hear, taste, and touch travels through the body in the form of electric signals. These signals pass from cell to cell until they reach their ultimate destination, the brain. If a mosquito bites you on the leg, that sensation creates signals that must travel to your brain before you are aware of the pest.

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Our sensations enter the brain in one place at the back near the spinal chord. Complex, rational thinking happens on the opposite side of the brain, at the front, which is the same part that Phineas lost. When the electric signals enter your brain, they must travel all the way across it before you can have your first logical thought about the event. This chasm in the mind between the entry of our senses and reason is a problem because the limbic system rests between the two. This is the area in the brain where emotions are experienced. Signals passing through the limbic system create an emotional reaction to events first. The front of the brain can't stop the emotion "felt" in the limbic system. Instead, the two areas communicate constantly. This process of communication is the physical source of emotional intelligence.

After his accident, poor Phineas was all emotion. In losing the entire front portion of his brain, he lost his ability to reason and react to his emotions. Indeed, everything he encountered, every experience he had, resulted in a rash emotional response. Phineas had zero ability to manage his feelings or even understand their presence. Every hour of every day Phineas was overcome by his emotions, much the same way you might be if you were being chased by a tiger or trying to help a child from drowning. Our brains are wired to make us emotional creatures. By experiencing the emotional response to an event first, our primary feelings are strong motivators of behavior. Some experiences result in emotions that we are easily aware of, while other times they may seem nonexistent. The location of the limbic system ensures that feelings play a role in every behavior.



The physical pathway for emotional intelligence starts in the brain at the spinal chord. Your primary senses enter here and must travel to the front of your brain before you can think rationally about your experience. But first they travel through the limbic system, the place where emotions are experienced. Effective communication between the rational and emotional centers of the brain is emotional intelligence.

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Billions of microscopic neurons line the road between the rational and emotional centers of the brain. Information travels between them much like cars do on a city street. When you practice emotional intelligence you have traffic flowing smoothly in both directions. Increases in traffic strengthen the connection between the rational and emotional centers of the brain. Your emotional intelligence is greatly affected by your ability to keep this road well-traveled. The more you think about what you are feeling—and do something productive with that feeling—the more developed this pathway becomes. Some of us struggle along with a two-lane country road while others have built a five lane super highway. A generous flow of traffic is the cornerstone of a high emotional intelligence. When too little traffic flows in either direction, the behavior that results is ineffective.

Why do people spend so much time ignoring their feelings or getting run over by them? Most lapses in emotional intelligence come from a simple lack of understanding. You can discover specific skills that empower the use of “smart” behavior in the face of challenges. Harnessing the power of emotional intelligence at work and home is no longer a choice. In order to be successful and fulfilled today it is essential to maximize these skills; for it is the one who employs a unique blend of reason and feeling who earns the greatest results.
