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The Moment of Death

The End.

Two simple words that mark the end of an idea, an inspiration, a story. These final, fatal words define the barrier between present and past, what is and what once was. What are we but mere stories carried along by time's cruel, linear nature? Unfortunately, these two words do not mark the end of our stories and, as a result, our ends become much harder to define. Is there any way to know before our final moments when they will occur, and what we experience when they come? What does it mean to die? When and how do we cross the threshold between life and death and will we ever be able to coin an exact moment as the moment of death?

The moments leading to our deaths are as unique as those experiencing them. There are literally thousands of ways to die. Does the method of death affect our last experiences? Although it would be fascinating, almost poetic, to look all the various ways of dying, perhaps we should limit our focus to some very common methods of leaving this world.

Drowning includes holding our breath as long as possible until we are forced to inhale. The larynx contracts restricting the water's access to the lungs, but also inhibits breathing causing the victim to suffocate (Mannucci). How beautifully terrifying. Fully conscious, fully aware, just you against your mind fighting to overpower the instincts of the body when finally your own body forces the frigid water down your throat, the taste of death dancing on your palate as you slowly slip away. A fight to the end, a dance of

survival, fear poisoning your mind as the knowledge of your own impending death consumes your oxygen-starved brain.

Excessive loss of blood known as “bleeding out” begins by organs shutting down in order to direct blood to the heart and brain (Mannucci). “At some point it probably ceases to be a thing of great pain and, rather, simply a slipping away” (Benjamin Abella, M.D. qtd. in Mannucci). As the heart pumps the blood out of your body, the pain ceases before the threshold of death is crossed. Although a terrible way to die, comfort can be found in the thought that, at least momentarily before death, the victim is not in pain. Perhaps this is why bleeding out is such a preferred method of suicide.

In most cases of death by fire, carbon monoxide from the smoke kills the victims, not the fire itself. Drowsiness progresses to a coma if exposure continues and the victim has no consciousness of death (Mannucci). Although most think of the idea of burning alive unpleasant to say the least, if the smoke, not the fire, is the real cause of death this may be the best of potential ends in that we would be unaware of our own passing. Personally however, no matter how horrible and terrifying death is, I want to be conscious to experience it. It is, after all, a once-in-a-lifetime experience. Like the finale of a symphony, death is too dramatic an event to simply be unaware of its occurrence.

Decapitation, one of the more elaborate ways of dying, involves the removal of the head and is considered quick and painless. However, it may possibly allow consciousness of the brain for a few seconds after the head is cut off (Mannucci). There is, apparently, an old story where a scientist’s colleague is sentenced to death by decapitation. Making it into an experiment (oh science, thou art a heartless bitch sometimes) the scientist told his colleague to blink his eyes as long as possible after his

head was cut off to see how long the head was conscious. The head blinked for eleven seconds (Mannucci). Perhaps it was just muscle spasms, perhaps it never actually happened, but it makes you wonder. I personally would like my last conscious moments to involve the knowledge that my head was still connected with my body thank you very much, but I suppose that is a personal opinion.

However, the fact that we have an opinion about death is interesting in itself. We contemplate death's methods, trying to reason which one would be the best finale to our lives. To some the idea of a slug of metal tearing its way through our brain in an electrical storm of neurons and memories is terrifying, even revolting. But there must be those who find solace in such a method, or their finger would never pull the trigger. Maybe it's because it's quick and efficient. Maybe it's the appeal of going out with a bang. I've always wondered if you could ever hear the deafening silence after the gun went off, or maybe even a ringing in your ears. I've always wondered if dead, blank eyes see for an instant and realize no one is there to save them. That they are truly alone. There's something captivating about the last sound you will ever hear, or the last thing you will ever see. How would you choose to spend your last moments? How would you choose to die?

How we die dictates how we perceive our last moments in this world, but what about *the* last moment? When do we cross that final threshold between life and death? Someone is considered clinically dead when both the heart stops and the person stops breathing (Mannucci). But these requirements, although accurate in describing death for many, are not absolute. Many people who flat line and stop breathing are able to be revived using cardiopulmonary resuscitation (CPR) and, recently, therapeutic

hypothermia. Documented cases describe “young, healthy people have fallen through the ice into icy rivers or into lakes... Their pulse stops but they are able to be revived *hours* after their heart has stopped” (Benjamin Abella, M.D. qtd in. Mannucci). In the last few years science has adopted this method to, in a sense, reset the patient after the body has been starved of oxygen and the recovery rate is favorable (Mannucci). So, when your heart stops and you stop breathing it means you’re dead, but you may not always stay dead? In the words of Lance Becker, M.D. from the University of Pennsylvania Emergency Medicine, “So there’s this point where someone’s mostly dead, and then there’s this point where they’re dead dead” (qtd. in Mannucci). Okay, so what’s the difference between “dead” and “dead dead?”

Although the clinical term of “death” is valid, death is connected very closely to the brain instead of just the heart and lungs in modern medicine. When the brain dies a patient is considered legally dead and is treated as such even though the actual body is still alive. An article explaining the definition and ways of determining brain death for Indian medical practitioners defined brain death as “the irreversible loss of all functions of the brain, including the brainstem [accompanied by] coma, absence of brainstem reflexes and apnea” (Goila and Pawar 8). The patient becomes a corpse with a heart beat. Physicians conduct various tests to examine brain function such as testing ocular movement, pupil response to bright light, and testing pharyngeal/tracheal reflexes, which, if absent, represent death of the brain stem, the most primitive and vital part of the brain (Goila and Pawar 8). However, the whole brain, not just the brain stem, is tested in brain death for signs of any activity that might suggest that the patient is in a critical, but potentially recoverable state instead of the irrecoverable state associated with brain death.

Brain death is a state in which “everything is off. There is no activity in the brain, there’s no blood flow in the brain, and there’s no way of returning to life. None” (David Hovda, Ph.D. qtd. in Mannucci). What separates dead from “dead dead” appears to be recoverability, so I guess that would put brain death into the “dead dead” category. It makes sense, if you have no ability to think and you will never regain that ability, aren’t you nothing more than flesh? How can you consider something without a mind truly alive? But, of course, this is medicine we’re talking about here. There’s never just one opinion.

Two nurses, Deborah Sundin-Huard and Kathleen Fahy from Australia doubt the reliability of testing brain death and doctors may be abusing the term to justify organ transplantation. They believe that brain death is mere medical jargon and doesn’t accurately reflect actual death. According to them, brain death has nothing to do with life and death decisions, only organ transplant decisions. “The only reason to diagnose brain death is to legitimize the procurement of top-quality vital organs for transplantation. A doctor does not need to diagnose brain death for any other purpose, including discontinuation of ventilation” (Woodcock qtd. in Sundin-Huard and Fahy 65). So brain death is equivalent to being legally dead, but people don’t have to be dead to take them off life support? I agree that brain dead patients are perfect candidates for organ transplant, but does that make them deader than someone who has brain activity but is in an irrecoverable coma with a brain damaged beyond repair? The article argues that brain death is not the same thing as being dead, even bringing in several examples where brain death was misdiagnosed and the patient recovered (Sundin-Huard and Fahy). Although recovery appears to be extremely rare, the possibility raises questions and debate continues on the accuracy of brain death testing. The article continues, directly attacking

the concept of brain death itself. “Brain-dead patients have functioning circulatory and respiratory systems (with respiration being defined in terms of gas exchange and energy production at a cellular level). If life is defined in terms of the integrated functioning of a person, then brain dead patients...are functioning integrated organisms and are thus living human people” (Potts qtd. in Sundin-Huard and Fahy 66). You know, as much as I don’t want to admit it, this makes sense. The brain makes up who we are but if this wasn’t true, single-celled organisms such as bacteria wouldn’t be considered alive. Furthermore, even more advanced organisms like flatworms, although they have a centralized nervous system, don’t necessarily have a brain as we think of it, just a primitive cluster of nerves, but try telling me that thing isn’t alive as it’s crawling over my hand. Of course, these things are not humans and they do not function the same way, but they are *alive*. Perhaps brain death isn’t death at all, just legal and medical jargon used not for defining death, but for a way of justifying taking the organs out of a body with a heartbeat. Does being human taint our view of death because we value our minds so much? Our analytical, curious, and imaginative minds set us apart from other animals, but is this enough to redefine death in our species?

California, 1989. A fifteen month old boy was kept on a life-support machine against his father’s wishes, but the doctors would not turn it off because the boy was not brain-dead. The father eventually held the hospital staff at gunpoint forcing them to switch off the machine and allow his son to die. Interestingly enough, the father was never charged with murder, only unlawful use of a firearm (Mims 116). In contrast to the article “The Problems with the Validity of Brain Death,” brain death was deemed necessary in this particular case to switch off life support. Even though the father

technically murdered his son he was never convicted of murder. Is this because the jury did not view the boy as alive even with brain-activity?

A few years ago my grandmother had a severe stroke that landed her in the hospital. Maybe she would have recovered from it. Maybe she would have still been walking and talking, buying my brother and I TV dinners, and telling us for the hundredth time about her first job at a retail store where she made a dime an hour (good money back then). I wish I could hear that story again, just one more time. Maybe I could have, but time just wasn't on her side that day. It took too long for someone to call an ambulance, too long to reach the hospital, too long for someone to tell me what was going on. The lack of blood flow to her brain left her in an irrecoverable vegetable state. I was hundreds of miles away when I got that call from my dad explaining to me that they were going to disconnect the feeding tube and let her die naturally. I remember his voice was just a little shaky, in a way that people are so bad at hiding over the phone, when he said "she's just not there anymore." It scared him. Nothing scares him. This was the man who dragged me up mountains, chased off bears, and laughed about flipping his canoe in the Green River. But *this*, looking at a living body watching their eyes look at you and knowing that they really aren't seeing you at all, watching someone breathe and knowing that the person you once knew is gone...it's been enough to scare him and to haunt him to this day. The only time he ever mentioned it again was after he had a little liquid courage behind him one night and told me that, if anything like that ever happened to him, to kill him. He didn't ever want to end up like that. She wasn't brain dead, but she wasn't my grandma anymore.

At the time I wasn't sure if I considered her dead or not in my head before they pulled the plug. All I knew was that I was relieved, although I still feel guilty about it, that I wasn't there so I didn't have to see it. I still remember the way she really was. My last memories of her are joyful ones; my father cannot share that reality with me. But I still don't know if I can answer the question of whether she was dead before or after they discontinued life support. They did technically have to take her off life-support for at least her body to die, so she had to at least be partially alive, right? But maybe that's just it. Maybe I've been looking at death through too narrow of a scope. I've only been talking about whole, complete people, but let's look deeper, literally.

Our cells die every hour of every day. Like martyrs they sacrifice their energy and lifespan to keep the entirety of the tissue, organ, organ system, organism alive. They keep dividing and dividing, making copies of a copy at an almost unimaginably fast pace, then die. But what determines when they die? Do they have estimated life spans as we do falling somewhere slightly over or slightly under their predicted time alive? As it turns out there is a thing called the Hayflick minute. The Hayflick minute is the amount of times a cell can divide before it stops dividing and dies: fifty (Mannucci). It's almost like they're on a timer. But death is a natural occurrence for cells in our body, a concept my Biology instructor beat into my brain. If it wasn't, it would be impossible for us to live. Damaged cells would never be replaced and if there was an anomaly in a cell the body would not be able to terminate it. We are constantly dying at a cellular level, but this death is the only way we can continue life. Right now, at this very moment, as you take in these words and as I write them, part of us just died. It makes that cold spot that likes to linger at the bottom of the stomach churn a little.

Our organs also die without the death of the whole person. We can replace and sometimes (with the case of removing a kidney or lung) dispose of an entire organ without destroying the overall individual. But this can go the other way as well. Soon after we die science has shown “that when people’s hearts stop organs and tissues can stay in a sort of quasi-dead state for at least hours” (Benjamin Abella, M.D. qtd. in Mannucci). Even longer after a person dies, if they donate their organs, do they partially continue to live? You could even take this further and look at children the same way. A child is formed by two gametes in which genetic information is stored, and that information is carried with the child throughout their entire lives and could potentially, in part, be passed down further to their children. All of us hold a tiny part of the first human ancestor, the first vertebrate, the first form of life. The smallest fragment of them remains alive in us passed down through the ancestry of life. Each species fighting an evolutionary battle to lend their genes to the next generation, and the next, and the next, leaving us to marvel at the history of evolution that made life at this moment possible. Is this the key to immortality or just a beautiful way of nature reminding us of the interconnectedness of life?

In the words of Lance Becker, M.D., “one of the things that we’ve learned in the past few years about death is that it doesn’t just occur at one moment, death is a process” (qtd. in Mannucci). So there is no moment of death, no magic point in time where we cross from alive to dead biologically. Our brain may die before our other organs, or the blood may stop flowing before our cells begin to expire. Perhaps death is like an artist painting a masterpiece. It likes to take its time. Are we simply a part of this process on a global scale moving through cruel but magical linear time? Parts die, but like the cells

dividing inside of us, the overall life continues and comes to a slow, but eventual, end. Maybe we are just part of something bigger, moving across the evolutionary timeline, donating our genetic material, not to something as small as our own lives, but to the very concept of life itself.

But wait, let's back up. As beautiful as that sounds, biology alone does not dictate our lives. Biologically our first ancestor is alive within us, but we cannot hear their thoughts, feel their pain, or taste their tears. Death is a spiritual experience as much as it is a biological one. Bioethicist James Hughes of Trinity College defines death as "The irretrievable loss of the continuity...and information in your personality. We are a sum total of memories, feelings, experiences, skills, and when we lose a substantial amount of that and it can't be retrieved then we're dead" (qtd. in Mannucci). According to Hughes, medical condition does not define death, rather, the loss of our personality, who we are, defines the end of life. Although he was referring to patients with brain damage, these words struck a deeper chord within my mind. If a musician loses his hands and the ability to create sounds that cast light into the darkest pits of the soul, if a teenage girl's brain tissue is damaged and her memories of her first love and senior prom are lost and scattered along with shards of glass from a car accident, if a woman loses the ability to love her partner and can no longer find simple pleasure from the breath on the back of her neck, does not part of who they were die in such a loss? Is this a form of death on a spiritual level?

There is one aspect of death that I have been trying to avoid as much as possible during this essay. But, like a demon scratching at the back of my mind, whispering dark thoughts every time I close my eyes, it will not be silenced. "Suicide, or self-

murder...doesn't happen in non-human animals and many people have found it hard to accept or condone...in humans because it seems to violate a natural law of nature" (Mims 30). Humans are unique. We are the only animals that can hate ourselves and the world enough to defy nature and end our own lives. Just before my fourteenth birthday, I sat in my room with the blade from a Venus razor in my hand, not cutting, but *digging*, into my skin. Each time a little deeper, each time a little faster, enough to leave a three inch vertical scar down my left arm for the rest of my life, but not enough to kill me. So I moved on to pills, swallowing more than I could count a few weeks later. Enough to make me vomit my insides as an offering to the porcelain gods, but not enough to kill me. Why? Why would such a young person want to throw their life away?

This isn't a sob story to up my word count. This isn't a story to make anyone feel sorry for me; I don't feel sorry for myself. Don't you dare pity me.

Back then it wasn't hard to find the words to describe why I did it, although they don't make much sense after all these years. The reason for suicide or attempted suicide "may seem to others too trivial to justify such an irrevocable response" (Mims 36) but that's the crazy thing about suicide, at least for me. Like dreams, it made perfect sense at the time. I had plenty of reasons I told myself over, and over, and over, and over, and over again: my mom was an alcoholic, my aunt just died, I got straight A's in school but no one in my family acknowledged me, my boyfriend dumped me, my best friends never wanted to be around me anymore, I was ugly, I was stupid, I was never going to get anywhere in life.

2:32 AM. I open my eyes trying to pinpoint the noise in the darkness. The name "Ethan" flashes on screen of my cell phone. The singer of Toad the Wet Sprocket begins

to repeat the chorus when I answer the phone. “Hello?” I ask still half asleep. Silence. I wake up a little more. “Hello? Are you there?” I wait a few seconds. “Were you asleep?” A voice mumbles on the other end of the phone. “Yeah, but what’s up?” I barely get the last word out when he breaks into tears. Ethan is one of my best-buds. Ethan is my boyfriend’s best friend. Ethan is a Marine. Ethan gets angry but he doesn’t cry, at least to me.

Ethan called me because he wanted to end his life and was smart enough to reach out to someone before he did. I spent over two hours that night talking to him. Why did he call me, not my boyfriend? Because he knew I had tried to kill myself in the past. He wanted someone to talk to, but more importantly, he wanted someone to understand.

He scared the shit out of me. That is *not* the call you want to get in the middle of the night. I listened to him trying to speak but all that came out was animalistic howls as he realized everything in his life was falling apart. But I took it, and I listened, and I cried, because that’s what friends do. As I look back though, I wonder if I was really talking to Ethan at all that night, at least the Ethan that I once knew. The quote comes back to me as death being defined as “the irretrievable loss of the continuity...and information in your personality” (James Hughes qtd. in Mannucci). It was like talking to a different person on the phone that night. If I could talk to my fourteen year old self again could I even identify her as me? I’m not the same person I was five years ago. Is she gone forever? Dead in yet another definition of the word? To die, not mentally as in brain death, but spiritually, is this how people are able to drastically change themselves as I have done? Does suicide become a logical companion to the death of the spirit; a method of acting out how we feel within? Ethan and myself are, luckily, still alive, but I wonder if at least

part of us died on our journey to this moment in life. Perhaps, like our cellular martyrs, partial spiritual death may be needed for us to truly live and grow as human beings.

Sacrificing a part of ourselves to become something better. Stronger.

I still don't know when the moment of death occurs, although I am tempted to believe that death *is* a process both on an individual level with our physical bodies and in the grand spectrum of the history of life. Death, so dynamic in its design can stretch its clammy fingers into the realms of science, medicine, and spirituality, and I cannot tell you which one is more accurate in describing the nature of when it occurs. This is the death of this paper, an end, and the final period will be its last breath. But, as it turns out, death may not be an act but, rather, a perspective. And maybe, at least in part, this paper may continue to live on in you.

Annotated Bibliography

Goila, Ajay Kumar, and Mridula Pawar. "The diagnosis of brain death." *Indian Journal of Critical Care Medicine* 13.1 (2009): 7-11. *Academic Search Premier*. EBSCO. Web. 28 Nov. 2010. This article by Ajay Kumar Goila and Pawar Mridula was intended to assist health care providers in India with understanding and diagnosing brain death in patients. The article defines brain death as the loss of all brain function including the functions of the brain stem and explains in depth the processes used by medical staff to determine if a patient is suffering from brain death or if their condition is recoverable. This article offers a unique view of what doctors actually do when determining brain death, their responsibilities when doing so, and potential problems they may face in the process. This article goes in depth enough to truly explain the process to other medical professionals, but also explains some of the basics of brain death in understandable terms and language. Because brain death qualifies as legal and medical death in much of the world, this article is extremely valuable to my research on the moment of death. Knowing how the medical community defines when a person is dead is essential to understanding and exploring the moment when a person crosses the line between life and death.

Mims, Cedric A. *When We Die: The Science, Culture, and Rituals of Death*. New York: St. Martin's Press, 1999. Print. This book by Cedric A. Mims examines death through both a scientific and cultural lens and looks at how and why we die and also what happens to our bodies after death. From the specific sections on what happens during the moment of death, the book discusses previous definitions of

death and how the current definition of brain death evolved and its criteria. However, it also examines if death should only be defined by medical terms or if death should be thought of as the death of that person's identity and self. Near-death experiences are investigated from both a scientific and spiritual perspective and it questions the value of such experiences. This book looks at death from more than a scientific perspective, which has the potential to make research into the moment of death more dynamic. This is essential, for death is not just a biological process, but a cultural and psychological one as well.

Moment of Death. Dir. Mark Mannucci. Perf. Peter Coyote. National Geographic, 2008. DVD. This *National Geographic* documentary analyzes when we cross the line between life and death. According to the film, to be clinically dead is not necessarily the same thing as being dead because we have ways to resuscitate people after their hearts and lungs cease to function. Death is not an instantaneous event, rather, it is a process which can be manipulated. It looks at how death occurs from the cellular level to the entire organism and compares the method of how we die to our experience of it. A historical approach is also used to look at how death has been determined in the past compared to how we determine it today and also how the very definition of death has changed over time. Near death experiences are also evaluated and both views, the effect of death on the brain or a spiritual experience, are considered. This documentary is a great overview of various angles of looking at our last moments and our experience of them and analyzes various points on the subject making a valuable asset to my research.

Sundin-Huard, Deborah, and Kathleen Fahy. "The problems with the validity of the diagnosis of brain death." *Nursing in Critical Care* 9.2 (2004): 64-71. Academic Search Premier. EBSCO. Web. 28 Nov. 2010. Written by Deborah Sundin-Huard and Kathleen Fahy, this article presents the argument that brain death is often misdiagnosed because of the methods used to determine it and inexperienced or unqualified medical professionals performing the tests to diagnose it. The methods currently used to determine brain death are discussed and so are the potential flaws associated with them. The article presents several cases in which brain death was diagnosed improperly and includes several studies that indicate that some variables which could impair the diagnosis of brain death are not considered. It also explores the controversy associated with transplanting the organs of brain dead patients, and how this may affect diagnosis of brain death. This article questions whether medical professionals should have the absolute final say on our moment of death and also emphasizes how hard it is to determine. This article is valuable to my research because it offers an opposing side to diagnosed brain death as the end of life.