

Pain- a few notes by hannah_g

I've read accounts of personal turmoil and there is a recurring description of the chest of the afflicted feeling tight, of a vice squeezing this area or a heavy weight atop it. It's a feeling that you too may have experienced, a sensation that emanates from within the bone of your sternum. It is tight and it aches, it's very real, it's the effect from a cause and that cause is not a bump or a strike.

Imagine an egg between two ping pong bats, the pointy ends of the egg touching the respectively red and blue grippy rubber of the paddles. Imagine you are holding one bat and someone you love is holding the other and you are both pushing hard because the egg is what connects you and you want to remain connected, you really, really want that. At some point the egg will break but until then the power of your wants keeps the egg in place, it makes you feel the egg, be aware of any small roll or vibration. But at some point one of you will remove your bat and the egg will fall. The bat might be withdrawn because of fatigue or death or because of another egg somewhere else. And then the egg you've both been holding falls to the ground and breaks and you can't fix it. Or you might have good reflexes and flip your bat so it's horizontal and you are steadying the egg by yourself, keeping it from falling via balance rather than force. One day, however, you will drop the egg. Your bat might follow. But, when that egg is between two bats and it's held there by the force exerted on either side of it, the sensation of that force on the eggshell is, I imagine, very similar to that in one's miserable sternum.

The Vagus Nerve is a multi-tasker. The tenth cranial nerve, it interfaces with parasympathetic control of the heart and digestive tract. The parasympathetic system is responsible for activities that occur when the body is at rest, things like digestion, salivation, lacrimation, arousal, urination, and defecation. The Vagus Nerve supplies motor parasympathetic fibres to

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nearly all of the organs which means that it is responsible for quite varied tasks including heart rate, peristalsis, sweating, speech. When the Nerve is overstimulated pain, nausea, and muscle tightness in the chest can occur.

Emotional stress can cause the brain to release chemicals that may trigger the sudden, temporary weakening of the muscular portion of the heart which can lead to heart failure. Takotsubo Cardiomyopathy names the condition (also known as 'broken heart syndrome') whereby the left ventricular apex with a hypercontractable base of the left ventricle is noted. The hallmark bulging out of the apex is the origin of the name, takotsubo, which means octopus pot, which are receptacles used by fisherman as traps.

Octopuses have three hearts and are among the most intelligent of all invertebrates. They have numerous strategies for evasion including hiding, speeding away, and squirting ink at their predators. They can camouflage themselves via colour-changing cells in their skin and their eyesight is excellent. They have been observed playing and escaping leading some biologists to argue that they have both short and long term memories. The majority of octopuses have almost entirely soft bodies, with neither internal skeleton nor shell which means they can squeeze through tight spaces. But they have a hard, sharp beak that can pierce shell and skin. They don't live long, between 6 months and a year, depending on the species. Reproduction is a cause of death. Males can only live for a few months after mating and females neglect to feed when taking care of unhatched eggs, eventually dying of starvation. In an experiment involving the removal of the optic glands after spawning, the resumption of feeding was observed in females and thus greatly extended lifespans. Some octopuses can perform autotomy, whereby they remove one of their arms (that continues to crawl) to act as a

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distraction to the predator. The amputated arms remain sensitive to stimuli and move away from unpleasant sensations. An octopus has a highly developed sense of touch, and can taste what it touches, however, it isn't known if it can still taste what its severed arm touches.

Octopus wrestling was popular on the west coast of the United States in the 1960s and the world championships were held in Puget Sound, Washington. Divers would wrestle the creatures out of shallow water and drag them to the shore where they were either eaten, given to aquariums, or thrown back into the sea.

Imagine wrestling a creature that has three hearts and no skeleton to protect them, just eight legs, a bag of dark ink (containing the same ingredients as your sun tan), and a beak.

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It felt like another bone ache, deep in the lengthening marrow, although there's little evidence that bone growth causes discomfort. The cramps would usually wake me up. I haven't thought of that pain for many years. My mum said they were growing pains. Helpless, entirely helpless, there was nothing either of us could do to stop the pain, just had to ride it out, a cold cloth on my forehead, clenching my jaw, weeping at the overwhelming physical experience that was simply my DNA fulfilling its instructions. The pain didn't matter to my *cells*, pain was just a by product from the trajectory of this organism's development. My legs hurt so much I tried to push the pain away by pushing my legs up and down my bed. At 7, 8, and 9 years old I didn't know I was an organism but I learned growing and pain were inextricable and endless. My poor mum, I'm sure I must have woken her even when I was trying to be brave and deal with my legs by myself.

As for injuries, I rarely considered the pain bad enough. I always thought it should be worse, unbearable in fact, and because it wasn't I felt I was somehow faking my sprained ankles and broken toes. Operations were different though, those brought engulfing pain; there was more pain than there was me. Maybe that's why my injuries' discomfort was hard to attribute value to.

In his book, *Three Dialogues Between Hylas and Philonous*, George Berkeley discusses perceptual relativity and argues that the same object can appear to have different characteristics depending on the observer's perspective. Thus when exposed to great heat I feel pain, the pain is within me, not the fire. The same fire can create the sensation of warmth. The fire does not contain pain, ready for distribution, it is only when one's body touches it that pain comes into play.

I realized I had a pain in my chest late one night and I began to think of other physical pain I've experienced, some of which I've spoken of here. And I have observed other people's pain this week- sore knees going up stairs, a paper cut, a stubbed toe, numerous mosquito bites, undiagnosed pain, a running stitch, overwhelming stress, a bike accident, a car accident, heartache, fibromyalgia- I saw all of this in the last 7 days and I'm sure there was a lot of other pain I didn't see, that was kept quietly under a 'Good-morning-how-are-you-I'm-ok-thanks.' I had a psychogenic pain in my chest and I interrogated it in an attempt to exorcise it to some degree. It was awkward writing this essay in the midst of pain caused by disease, condition, and accident, that pain seems more real, like the operation pain I mentioned earlier. I have a pain in my chest, a pain that doesn't threaten my life, a pain from a fire that got inside and kept

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me warm and is now burning me as it leaves. I will bear this small pain, this necessary pain, this pain that will end, just like everyone else and I will say I'm pretty ok, if you ask.