

*two x four
streams
of tears*



Diane Mahín

Judith Butler, *Precarious Life: The Powers of Mourning and Violence* (London: Verso, 2020), 26.

I want to talk about crying, which I cannot do without talking about loss and grief. Crying can be understood as an expression of grief, a psychological state caused by loss. Crying out of grief arises from despair caused by loss, or the idea of loss, either big or small. This feeling of despair is so large that it can not be put anywhere. It can not be transformed into any helpful action, so the body takes over. It releases tears, activates muscles, and influences heart rate and breathing, beyond control.

Being a living body means you have a certain degree of vulnerability. From birth on, your survival and needs are in the hands of others. Living with a degree of vulnerability, means you are at risk of loss. Therefore, the risk of loss is the thing that all humans know. Most humans have lost someone or something. Judith Butler therefore argues that, if there were to be anything that could make humans proclaim there is a ‘we’, it is loss.

The body implies mortality, vulnerability, agency: the skin and the flesh expose us to the gaze of others, but also to touch, and violence, and bodies put us at risk of becoming the agency and instrument of all of these as well. [...] constituted as a social phenomenon in the public sphere, my body is and is not mine.

While the experience of loss, the experience of grief, and the experience of crying is shared amongst all humans, the extremely unequal distribution of loss can not be denied. Depending on systemic, political, and social conditions, risk of loss differs. I cannot start to compare my risk of loss to that of Palestinians in Gaza and the West-Bank, who I witness being killed and lose their loved ones daily by the state of Israel as the genocide unfolds.

As I am writing about grief and loss, Palestinians are experiencing an extreme escalation of loss in all its forms which they were already subjected to for decades. As I am writing about grief, parents in my mother’s homeland, Iran, are witnessing their teenagers and young adults being killed. As I am writing about grief, innumerable losses are occurring in the world due to systemic and oppressive violence which do not get the attention they deserve.

There are many forms, levels, and intensities of grief, all existing at the same time, and it is impossible and damaging to suggest one can actually feel the grief of others. As Sara Ahmed argues, ‘an ethics of responding to pain involves being open to being affected

by that which one cannot know or feel'. Ahmed continues to state how this ungraspability of pain of the other brings the ungraspability of our own pain to the surface. Even when it is felt in our own bodies, grief is an experience which happens beyond our control and thus to an extent, it is not graspable.

Ibid, 31.

The sociality of pain - the 'contingent attachment' of being with others - requires ethics, an ethics that begins with your pain, and moves towards you, getting close enough to touch you, perhaps even close enough to feel the sweat that may be the trace of your pain on the surface of your body. Insofar as the ethics of pain begins here, with how you come to surface, then the ethical demand is that I must act about which I cannot know, rather than act insofar as I know. I am moved by what does not belong to me. If I acted on her behalf only insofar as I knew how she felt, then I would act only insofar as I would appropriate her pain as my pain, that is, appropriate that which I cannot feel.

The following text is written in preparation for my graduation work, which will be a sound and movement composition of vocalized crying by three performers, resulting in a gallery performance. In creating this composition, I will stay close to the phenomenon of vocalized crying itself, as well as its manifestations in body and muscle movements. This thesis will embed the phenomenon of crying in a multitude of perspectives: political, cultural, phenomenological, biopsychosocial, and personal. Although these perspectives mirror my own situatedness regarding crying, grief, and mourning, my grief lays bare my interconnectedness and therefore responsibility to other human beings.

I am moved by what does not belong to me

Loss and vulnerability seem to follow from us being socially constituted bodies, attached to others, at risk of losing those attachments, exposed to others, at risk of violence by virtue of that exposure.°

Grief brings our ties to others to the forefront. The pain of losing someone or something shows how tied you used to be to this person or thing. This naturally reminds us of the fact we are dependent on one another and therefore ethically responsible for each other. °° Experiencing grief shows that apparently you are not autonomous, and apparently you are not in control.

Loss is enigmatic. Even when you know who or what you have lost, it is not always clear what it is in that person that you have lost. Losing something or someone, renders one naked and exposed, and leaves one with questions. Who am I without you? ‘Perhaps what I have lost “in” you, that for which I have no ready vocabulary, is a relationality that is composed neither exclusively of myself nor you, but is to be conceived as the tie by which those terms are differentiated and related’.

When you grieve, you go to a bodily state outside of your control. You could say you are not in one piece anymore, that you are beside yourself. You do not always know what it is that is taking over you while in grief. You do not always know what you have lost, or what in the person or thing you have lost, is lost. In effect, your unknowingness is exposed. Your ‘unconscious imprint of your primary sociality’ is exposed. Butler poses that being with this state of unknowing can lead to a reorientation for politics. °°°°

‘Is there something to be gained from grieving, from tarrying with grief, from remaining exposed to its unbearability and not endeavoring to seek a resolution for grief through violence? Is there something to be gained in the political domain by maintaining grief as a part of the framework within which we think of our international ties? If we stay with the sense of loss [...] are we returned to a sense of human vulnerability to our collective responsibility for the physical lives of one another? Could the experience of a dislocation of First World safety not condition the insight into the radically inequitable ways that corporeal vulnerability is distributed globally?’°°°°°

Judith Butler proposes grief as a resource for politics, as it can be seen as a process in which you identify with suffering itself again, to identify with social vulnerability being at the core of the human

previous page:
 ° Butler, Precarious
 Life, 20.
 °° Ibid, 21.
 °°° Ibid, 22.
 °°°° Ibid, 28.
 °°°°° Ibid, 30.

Ibid, 30.

Ibid, 46.

Ahmed, The Cul-
 tural Politics of
 Emotion, 31

condition. Grief is disorienting: what have I lost, what is left of me? These questions can form a fundament for a new understanding, moving from 'the narcissistic preoccupation of melancholia' towards actually considering your vulnerability and that of others. Once this consideration kicks in, you might start critically evaluating and opposing the conditions 'under which certain human lives are more vulnerable than others, and thus certain human lives are more grievable than others.

Only when vulnerability is seen and recognized, a relationship can be ethical. Recognising the vulnerability of oneself and the other, namely, is a precondition for humanization.

I find that my very formation implicates the other in me, that my own foreignness to myself is, paradoxically, the source of my ethical connection with others. I am not fully known to myself, because part of what I am is the enigmatic traces of others. In this sense, I cannot know myself perfectly or know my "difference" from others in an irreducible way. This unknowingness may seem, from a given perspective, a problem for ethics and politics. Don't I need to know myself in order to act responsibly in social relations? Surely, to a certain extent, yes. But is there an ethical valence to my unknowingness? I am wounded, and I find that the wound itself testifies to the fact that I am impressionable, given over to the Other in ways that I cannot fully predict or control.

Staying with grief, staying with crying, means surrendering to unknowingness. It is in this unknowingness that 'I am moved by what does not belong to me'.

two x four streams of tears

I talked to my mother about crying, as she seems like the one who can tell me the most about it. Most of my crying hours were in front of her, as a child at least. I remember her crying a lot when I was young, for many reasons. A good song, the loss of her mother, when she spoke about a childhood friend, when she spoke about Iran, when she felt thankful for us, when she felt injustice.

Without any of us knowing, a benign tumor which ended up being the size of a tennis ball grew inside her frontal lobe for the past 20, 30, or, according to some neurosurgeons, even 40 years. This made her stop being able to cry for many years. In November 2022, the tumor was discovered and removed. Now, my mother cries again. A lot. She now refers to those years as excruciating in regard to her inability of emotional release. Whenever she felt despair, intense sadness, nostalgia, or loss, she could not release the emotional tension.

When I called her to talk about crying a year post surgery, she told me she loves the instant release she feels when tears roll down her face. She used to shed a remarkable amount of tears. For example, when she just moved to the Netherlands from Iran in her early twenties, an embassy-employee spoke unjustly regarding her Iranian nationality. She instantly started crying at the counter at the thought of losing her Iranian nationality, with four streams of tears running out of each eye. Eight streams in total. The embassy-employee exclaimed: 'Poor thing, look at those tears! Look at those tears!'.

There's something inside of me that hurts. Oh, how it hurts and how it screams for help. But tears aren't there in the machine that is me.°

It is enigmatic why humans cry with tears. Despite some suspicions, humans seem to be the only animals who cry with so-called psychic tears. Psychic tears that are shed because of emotions, instead of reflexive tears like the ones used to expel a fly in the eye. Strangely, these psychic tears only start flowing after 4.5 months of being on this earth. During their first 4.5 months on earth, babies cry without tears. From then on, psychic tears are shed when crying. I never thought about this before, but now that I know this, I do have a lot of memories of holding crying babies in my family that had an all red, puffy, and very loud screamy face, but when I held them against my cheek, their faces felt awfully dry and soft.

previous page:

* Clarice Lispector,
*The Stream of
Life* (Minneapolis:
University of Min-
nesota Press, 1989).

Ad Vingerhoets,
Lauren Bylsma,
and Jonathan Rot-
tenberg, "Crying:
A Biopsychosocial
Phenomenon,"
essay, in *Tears in
the Graeco-Roman
World*, ed. Thor-
sten Fögen (Berlin:
Walter de Gruyter,
2009), 446-447.

David Huron,
"On the functions
of sadness and
grief," chapter, in
*The Function of
Emotions: When
and Why Emo-
tions Help Us*, ed.
Heather Lench
(Springer Interna-
tional Publishing,
2018), 71.

Not only do humans cry with tears, the quantity of human crying in their life span is significantly larger than that of non-human animals. From the moment they are born until the moment they die, a lot of humans cry. One way to explain crying is looking at it as a cry for help. One cries when one feels helpless, when the emotions in the body are too large to transform into functional actions to help oneself. Following this logic, humans need way more help throughout their lives than animals do.

There is a theory that I find quite absurd (but apparently it is a theory that is very probable and accepted) in explaining why humans are so much more helpless than non-humans, and therefore cry with such force that liquid starts leaking from their eyes. In the course of evolution, the brains of humans were rapidly growing larger and larger. This caused all humans to be born prematurely in order to prevent the brain and skull getting too large for the birth canal. Therefore humans are born more helpless, more needy, than for example a giraffe who just walks off after birth. Because humans have such a long period of time where they are helpless, they need clear, and preferably multiple, communicative features to alarm people to help. Therefore, humans cry throughout their lives with a combination of sound, facial features, and wetness that is not seen in other animals.

When you think about it, the face of someone crying actually looks quite similar to them having an allergic reaction: inflammation, tears, and snot. Evolutionary theory has something to say about this. According to these theories, there are two types of communication: cues and signals. A cue is communicative information that is accidental. You may think about the buzzing sound of a mosquito because it simply needs to flap its wings to come close to you. A signal is intended as functional communication, like a snake rattling its tail as a warning. When someone is injured, ill, or allergic, it results in the development of inflammation, snot and tears. This is an unintended conveyance of information, and thus a cue. However, these cues do provoke compassion and help. Evolution found this useful for survival, so now when you need psychical and emotional help that brings you to cry, you look like you have allergies. These theories are supported by experiments where observers could not confidently distinguish those symptoms caused by microbial stress from those symptoms arising from cognitive or social stress.

Huron, On the functions of sadness and grief, 67.

Ibid, 67.

Suzanne Stougie, Vingerhoets, and Cornelius, "Crying, Catharsis, and Health," *Emotional Expression and Health*, 2004, 225-88.

Huron, On the functions of sadness and grief, 66.

Ibid, 68.

There are a lot more arguments in favor of the idea that shedding tears while crying is not an unintended communicative byproduct (a cue) but a functional communicative symptom (a signal). To begin with, there is a distinct neurological path when psychic tears are produced. On an evolutionary level, this shows that psychic tears grew to have their own function compared to, for example, reflexive tears. Next, when a group of cis men were asked to smell collected tears, their testosterone levels dropped significantly when they were exposed to psychic tears. These testosterone levels did not drop when they smelled reflexive tears. On top of that, their sexual arousal decreased. Therefore, there must be a specific pheromone in psychic tears, which makes crying a signal 'that induces a biologically prepared stereotypic response'. Finally, cathartic theories of crying describe the needed function of purification that takes place when shedding tears. Here, the production of tears functions as a reduction of nervous energy to palliate negative bodily states. Tears contain toxic substances and stress hormones and by shedding them you excrement them from your body.

Not only is the ejection of tears used as an argument for the communicative aspect of crying, vocalization is too. There is a very strong compulsion to vocalize when crying. When someone cries, their vocal folds are constantly engaged, even when inhaling. This causes ingressive phonation. Ingressive phonation is extremely rare, and across most cultures it only happens when crying and laughing. When someone weeps, it is common to hear a neutral vowel when they inhale. As the vocal folds are engaged constantly, when air flows through them during the inhale, a sound is made. This agitated attitude of vocal fold muscles indicates that crying is an intentional mode of communication. Not only are the vocal folds agitated, many other distinct facial muscles are contracted. This, in combination with the other symptoms of crying (inflammation, snot, tears, redness, and sound), make it extremely obvious to see that someone is crying.

If it is so hard to miss, it must be an intended communicative signal. On the other hand, sadness is visually less obvious. Evolutionary speaking, sadness has another function than grief and crying. It is a self-directed state and reflexive state. The communications in an episode of sadness are unintended cues. Grief, however, is an other-directed state. The signal of crying is intended to communicate to the other.

Judith Kay Nelson,
"The Meaning of
Crying Based on
Attachment Theory," *Clinical Social
Work Journal*, 26,
no. 1 (1998): 9–22,
16.

Ibid., 17.

Huron, On the
functions of sad-
ness and grief, 68.

• manipulative crying

If crying is a signal, what do humans want to communicate with this crying? Some scholars argue that this depends on the stage of grief the crier finds themselves in. According to Judith Kay Nelson, there are different modes of crying relating to different stages of grief, protest or despair. The function of protest crying is to undo the event that causes the grief. Protest criers want action, they want change. So even when sympathy is offered, protest cries often do not want comfort. They want action.

Sad crying on the other hand, parallel to the dejected, intermittent wail of the infant in the second stage of responding to the loss of the parent, indicates an abject, helpless, and hopeless acceptance of the fact of the loss. The possibility of reunion, reconciliation, recovery, or restoration is abandoned and a deep, heavy sadness settles in.

Other scholars generalize all forms of crying over one main function. According to them, the main function of crying is to provoke an affective response in another. You want the other to feel compassion, sympathy, to offer assistance, or to terminate aggression. The specific function of terminating aggression can be seen like raising a white flag, like surrendering. It resolves the conflict. Just like the embassy-employee softened when my mother started crying. Just like a dog rolls on its back 'playfully' when another dog is threatening it.

This instrumental function of crying can occur subconsciously, but it is sometimes used very consciously as a tool. Ruby Hamad describes a phenomenon called 'white women's tears'. In her book, she describes a viral video called BBQ Becky which is described as a living example of Hamad's thesis.

In it, the middle-aged white woman who would quickly come to be dubbed "BBQ Becky" can be seen on her mobile phone angrily requesting police to show up to eject a black family barbecuing in a park on Oakland on a Sunday; she allegedly said they were using the wrong kind of barbecue for the area. After many words of consternation between Becky and the white woman who is filming her, a defiant Becky physically refuses to return a business card belonging to the other woman and storms off.

The camera follows her, and the transformation in Becky's demeanor is remarkable to witness. In a matter of minutes, she goes from assertive to combative to aggressive to defiant, and finally, when she spots and

Hamad, White
Tears Brown Scars,
76.

rushes toward a bewildered-looking white male police officer, becomes the white damsel in distress. Nursing into tears when she reaches her apparent rescuer, she manages to heave out a few words between gulping sobs: "I am being harassed".

Huron, On the
functions of sadness and grief, 80.

In this case, the white woman knew exactly how crying can be used as a tool for manipulation. In contrast, when someone is not using crying as a tool, but actually grieving, the original function of crying (asking for help) is not instrumentalized consciously. There is a difference between the phenomenological experience of crying and the evolutionary origins of it. When we cry out of grief, our phenomenological experience is expressing deep sorrow, an unhappy state of being. We are not consciously crying in order to receive compassion. When we observe others who cry, our experience is not that we will help them in order to have them help us in the future. Instead, we feel compassion and powerful connection.

Huron, On the functions of sadness and grief, 68.

invisible crying

The fact that the subjective experience of crying is disconnected from its evolutionary origin, also explains why people cry alone. Even when there is no audience that might potentially help you, you feel a deep insolvable abyss in your chest and you can not do anything else but cry.

There are more reasons why people cry alone, or wish to hide the fact they are crying in public. This can be explained by the principle of costs and benefits. To every action, there are costs and benefits. The benefit of crying is clear by now: it is to provoke help and terminate aggression. However, the cost is the diminishment in social status. When you admit you needed help, you show that you were not able to do something alone. So the human weighs the costs and benefits when they feel the need to cry. If the costs seem too high, one may do everything in their strength to mask the crying. ° Look away, hide your face, run to the toilet, try to keep your vocal tremor in control. Humans, compared to other animals, have a frontal lobe that can be used for self control. Of course, these ideas come from an evolutionary perspective based on ancient times where fitness for survival was still relevant in a specific manner. Today, many people do not see seeking help as a weakness, but more so as a strength.

The one thing my mother actually enjoyed about not being able to cry, was related to the costs of crying. She used to cry everywhere and all the time, which at times embarrassed her, especially when living amongst Dutch people who generally do not cry so much publicly, compared to Iranian crying culture. She had a particularly bad conflict with some colleagues one day, where they all attacked her as a group. Instead of crying, she was able to calmly defend herself, because she simply was not able to shed tears. Not knowing that a brain tumor was the reason for this. When the conflict resolved some time later, colleagues told her it was so 'strong' of her to not cry. My mother was happy with her attitude as well, as she was able to show strength. I think and hope we are moving to a culture where crying is not seen as a decline in social strength. I hope my mother will cry whenever she feels like now that she can, without being bothered by social status.

Butler, Precarious
Life, 21.

Joan Kirkby, "Remembrance of the Future: Derrida on Mourning," *Social Semiotics*, 16, no. (2006): 461.

transformative mourning

If you have the luxury, time, and conditions for it, introspective sadness, grief, and expressive crying can turn into a period of mourning. Judith Butler describes mourning as submitting to a transformation which is caused by loss. A transformation from which you do not know the outcome in advance. As the ties we have with others constitute who we are, losing those ties reveals something about who we are.

Derrida also speaks about mourning as a transformation. In *Memoires for Paul de Man*, Derrida describes mourning as an ongoing conversation with the dead. He even describes it as forming a friendship and connection with the otherness of the dead. The dead, according to Derrida, are both with us and beyond us and call us to responsibility and transformation.

I am responsible for the death of the other to the extent of including myself in that death. I am responsible for the other inasmuch as the other is mortal.^o

The mourning cycle is an oscillation between periods of grief and periods of sadness. Sadness and grief are two different, complementary states that arise in response to difficult conditions. When we are faced with difficulty, sadness optimizes our own introspective behaviors. Its symptoms are directed to slowing down, and are not meant to communicate to others. Grief is intended to influence the behavior of others, and therefore is in fact meant to communicate. The obviousness of a person crying in this logic belongs to the realm of grief, more than to that of sadness.^{oo}

previous page:
° Kirkby, 463.
°° Huron, 66.

the mourning cycle, a case study

The mourning cycle begins. It starts with a feeling of unwelcome, very unwelcome, separation entering in the body from the ground up.

The body tries to translate the energy of separation into actions.
Talk, eat, move.
Tries to translate the energy of separation into actions.
Grab, hit, swallow.
Tries to translate the energy of separation into actions.
Pull, catch, cradle.
Tries frantically to translate the energy of separation into actions.
Paint the wall, say no, squeeze.

There comes a point where the feeling of separation grows too big, there's no way to translate the energy into actions. So it needs to go somewhere else. The body takes over; it knows what to do when things are out of control.

(in random order, symptoms may occur separately)

increasing heart rate
increasing blood pressure
deeper breathing
erratic breathing

an opened mouth
corners of the lips turn down
raised cheeks, like when laughing or squinting
eyes cast down, sagged upper eyelids
inner corners of the eyebrows are pulled up°
muscles of the face and neck contract

the weeping starts

flushed face, congested nose, constricted pharynx.
lump in throat.
choked up.

wailing (long sustained tones)
whimpering
moaning crying

punctuated breathing interrupts the vocalizations
deep vocalized breath out, erratic, punctuated, serial breaths in
aaaah-ah-ah-ah-ah-ah-ah-ah

Georges Bataille,
On Nietzsche (New
York: Paragon
House, 2016), 64.

Sobbing signifies broken communication. [...] It is comparable in sobs to the spark that is caused by pulling an electrical cord out of the wall. It is precisely because communication is broken that we feel it as a tragedy when we weep.

more snot accumulates in the nose
the vocal timbre becomes nasalized
rapid inhalations increase to keep the snot in
the constriction of the pharynx increases
it destabilizes falsetto and modal phonation
the voice cracks and breaks
arytenoid cartilages draw together
ingressive phonation
narrowing throat
gasping sounds
the edges of the vocal cords tense
falsetto phonation

a hurting throat
weeping (shedding tears)

the weeping takes a while
the face becomes red and puffy
thick eyes
red eyes

Huron, On the
functions of sad-
ness and grief, 62.

stretch your arms, harm yourself, slap your face, pull your hair, beat
your chest

Georges Bataille,
Blue of Noon (Lon-
don: Paladin Books,
1988), 12.

*She was crying, with wild entreaty, the way one vomits. She was sobbing
so hard her hair was drenched with tears.*

passive sadness (stage of anhedonia)
decreasing heart rate
low arousal
slow breath
shallow breath

attention and engagement with the world are poor (norepinephrine)
poorly toned, slow reacting muscles (acetylcholine)

slow movement
lethargic movement

reducing activity
slumping posture
relaxed face muscles, and therefore a dropped chin
relaxed zygomaticus muscles (used for smiling and weeping)
flat cheeks, narrow face
lowered head
drooped eyelids

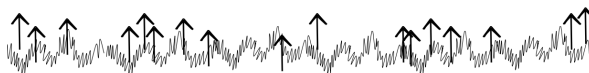
speaking infrequently, less, or not at all
speaking with a weak voice
quiet, slow
low in pitch
monotone
mumbling
breathy voice
dark timbre

seven accounts of ‘vibration’

(to move continuously
and rapidly to-and-fro)

A crying voice vibrates. When the voice is still able to speak, the voice is trying to fight against the engaged vocal folds, resulting in wobbly words (~). When the crier surrenders, the rapid compulsive inhales (↑) disrupt vocalizations, resulting in semi regular interruptions.

Caller Hello?
B Hello? You okay?
Caller ~Um::~~
~Yeah I’m ok(h)ay~
B What happened?
Caller .HHH so::=um:: okay.=so ↑Kathryn was just
saying abou::t
ye know th-
AHH HHHk ↑↑ iuHH ↑↑ hh ↑↑ uh
B ...
Caller ↑↑ I ↑↑ a(h)n’t ↑↑ ta(hh)l↑↑k.
Caller 2 Hello?
B Hello?
Caller 2 I’m sorry she’s just like, broke out in tears, she can’t
speak. °



Tahrir is an ornamentation used in Iranian classical singing (āvāz آواز). The origins of this vocal technique are not clear, as similar techniques exist all over the world, for example Slavic, Korean, Japanese techniques and Swiss yodeling. The word tahrir originates from the Arabic word for liberation. Tahrir is based on the sounds of a nightingale, which symbolizes the yearning for the divine in Persian literature such as Hafez’ poems. Tahrir is the production of frequency jumps to a higher frequency (the secondary note) in intervals of 50-70 ms due to quick alterations in laryngeal mechanisms. °° One of these jumps is called Tekiyeh, one or more of these jumps is called Tahrir. The jumps occur so fast that it is perceived as small abrupt breaks in a continuous melody, without perceiving the secondary note. This is where tahrir differs from vibrato. Vibrato gradually oscillates around a primary note with a small deviation, which results in the perception of secondary notes. Tahrir travels from the primary note with a sharp rise and fall to only a higher secondary note, in such a fast pace that this secondary note is not perceived.

previous page:
*Hepburn, 251–90.
**Bahadoran.



Claron McFadden,
“Voice Training”
(lecture, Sandberg
Institute, 2022).

A succession of small breaks can be achieved as well during phase cancellation, which is achieved with two people. Two people stand facing each other and pick a note together, making sure they agree on the same vowel sound at a similar volume. Then, one person holds onto the note while the other gently adjusts the pitch a bit higher or lower. As the two notes come close, their sound waves start interacting, creating a prolonged tone with many small breaks. The result is a wavering, crackling sound that might give you an uneasy feeling.

Nina Sun Eidsheim,
Sensing Sound: Singing and
Listening as Vibrational Practice
(Durham: Duke
University Press,
2015), 131.

Not only the examples mentioned above, but sound in essence are vibrations traveling through materials such as air, gas, and water. The human body, being made up of these materials, receives these vibrations on a physiological level. In *Sensing Sound: Singing and Listening as a Vibrational Practice*, Nina Sun Eidsheim asks how sound “as an inanimate object enables human subjects (individually and collectively) to form and transform themselves.” Instead of only understanding sound as a symbolic phenomenon, she focuses on sound as a material and intermaterial vibration.

A human ear drum can pick up and transform soundwaves between 20 Hertz and 20 000 Hertz into neurological signals. Even though other body parts can not transform these vibrations neurologically, they do pick up the vibrations of sound. On top of that, certain body parts resonate with certain frequencies.

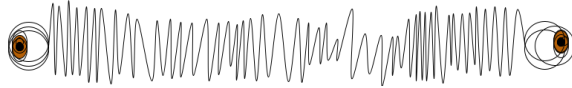
Ibid, 123.

Resonance occurs when an external vibration matches the vibration of an object, which causes an amplification of that frequency in the object. Each thing, be it a human body or a table, be it inanimate or growing, is made out of constantly moving molecules. Therefore, each thing vibrates with a certain frequency. This is why a glass can break when a high pitch noise matches the natural frequency of the glass and starts vibrating intensely until it breaks.

The human body does not have one natural vibration. The different parts vibrate at different frequencies. In a seated person, the natural frequency of the abdominal mass is 4-8 Hertz. When a sound is produced at 4-8 Hertz, the human ear can not perceive this. However, the abdomen will resonate and can amplify this vibration up to 200 percent. A lower arm resonates at 16-30 Hertz. A head vibrates at

Ibid, 133.

20-30 Hertz. The chest wall vibrates at 50-60 Hertz and an eyeball at 20-90 Hertz. The natural frequency of the chest wall and eyeballs are within the hearing range of a human ear. Therefore, it is common to feel low basses at concerts in your chest, whenever it hits the sweet spot of your particular chest's vibration and amplifies it. I must say there have been times that my eyeballs resonated at concerts.



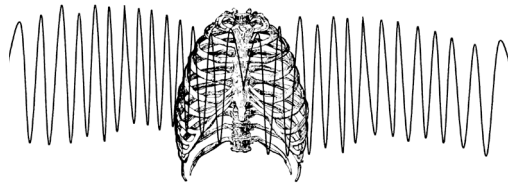
The examples above are vibrations inflicted by sound. Be it vocal techniques, involuntary emotional voice tremor, or the essence of sound. With emotionality come more modes of vibration. Intense emotion can be read by the body as a threat, which causes a release in hormones such as adrenaline and cortisol. The high amount of adrenaline can cause tremor when the human or non-human animal does not use the adrenaline to actually fight or flight. Neurogenic tremoring is a therapeutic method to intentionally help the body shake off the excess adrenaline. The shaking or vibrating action helps release muscular tension, eliminate excess adrenaline, and restore the nervous system to its neutral state. A dog does this automatically after each threat, a human might need a little more help. Either by shaking themselves, or asking another to help.

Marnie Vinall,
"Can Shaking Help
You Heal Stress
and Trauma? Some
Experts Say Yes,"
Healthline, March
5, 2021.

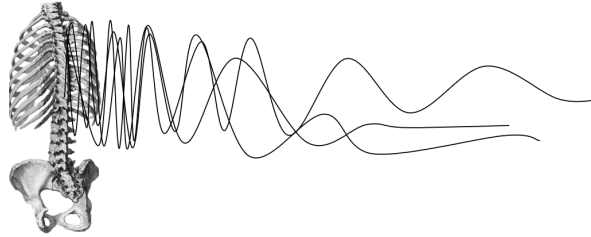
Person A is lying on their back. Person B puts their hand on A's sternum, and presses lightly. A relaxes. Person B starts rhythmically rocking A's chest back and forth, mimicking the fetal heartbeat (between 120 and 160 per minute). The pulsing movements stimulate the nervous system to relax. The oscillations easily and deeply propagate throughout the entire body, as a human body is mostly made of water. Intense emotions may arise during the session.

Daryaei, Malekza-
deh, 61.

Mourning rituals in Iran involve beating the chest. An example of one of these rituals occurs during Ashura. Throughout the Shiite



world, muslims publicly mourn Imam Hussain, who was killed during the battle of Karbala. During this time, Shiite muslims reenact the battle of Karbala and express grief passionately, by beating their chests. Processions known as Matam occur, where groups of men march through the streets. The leader chants mournfully, and male participants pound their chests and self-inflict wounds with a chain. With these rituals, they express the deep sorrow and solidarity in commemorating the suffering of Hussain.



My mother did not have a strong spiritual relationship with this particular ritual. She did however watch the procession every year with her friends, which was an opportunity for flirting with the men beating their chest, who cheekily signaled their phone number to her in between chest hits. For me, growing up outside of Iran, Ashura was unknown to me until my cousin who grew up in Iran told me about it. We were in Turkey and heard the chants of Ashura in the distance. My then thirteen year old cousin started beating her chest, her face turned sorrowful. Outside of these religious rituals, I have experienced my family members beating their chest when they were in despair, for example when my grandmother died. When I was young, I always found this a scary sight, and judged it as a dramatic response to emotions. Now that I am older, I notice I tend to tap on my chest, hold it, or shake it when overwhelmingly difficult emotions arise. Someone told me that the tremor that comes with the chest beating is a way to deal with releasing the hormones that come with despair. It makes sense, it does feel soothing. When my mother listened to music that made her particularly emotional, she would rock side to side with a smile, and tap her chest rhythmically, wiping her tears when the song ended.

following page:

° Forough Farrokhzad, *Sin: Selected Poems of Forough Farrokhzad* (Fayetteville, AR.: University of Arkansas Press, 2010).

Listen

Hear the darkness blow like wind?

I watch this prosperity through alien eyes

I am addicted to my despair

Listen

Hear the darkness blow?

This minute, inside this night, something's coming to pass.

The moon is troubled and red;

clouds are a procession of mourners waiting

to release tears upon this rooftop,

about to crumble, to give way

گوش کن

وزش ظلمت را میشنوي؟

من غر یبانه به این خوشبختي مي نگرم

من به نوميدي خود معتادم

گوش کن

وزش ظلمت را میشنوي؟

در شب اکنون چيزي مي گذرد

ماه سر خست و مشوش

و بر این بام که هر لحظه در او بیم فرو ريختن است

ابر ها همچون انبوه عز ادارا

لحظه باریدن را گويي منتظر

باد ما را خواهد برد
فروغ فرخزاد

excerpt from: The wind will blow us away
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